

Control Solutions

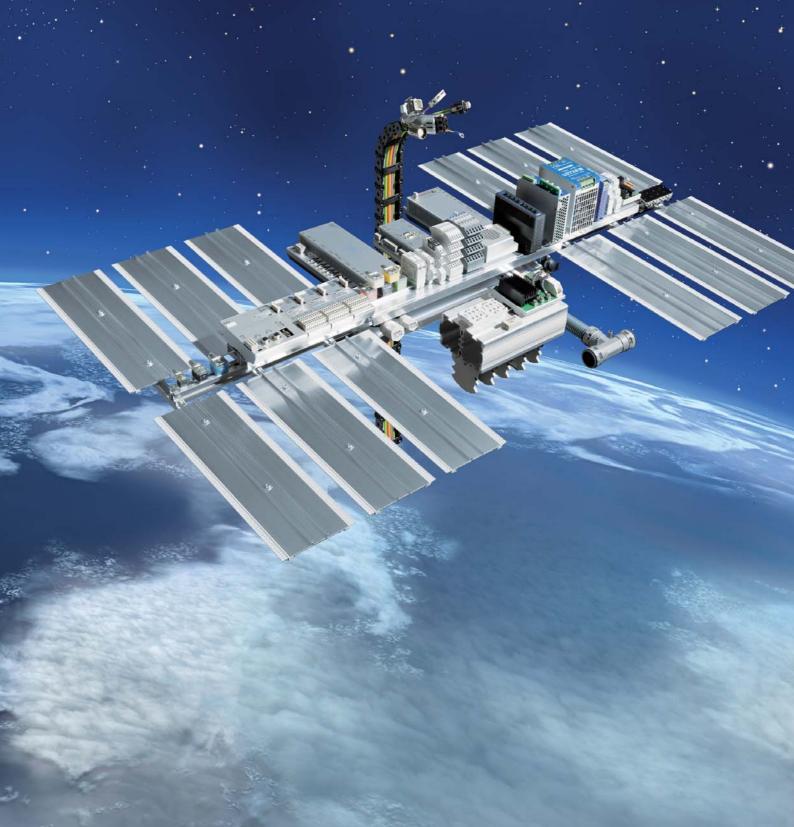
LÜTZE Converters

LCIS Signal Converters
Microcompact Converters
Monitoring Relays



Efficiency in Automation

Cable • Connectivity • Cabinet • Control



Welcome to LÜTZE

Cable Solutions



Connectivity Solutions



Cabinet Solutions



Control Solutions



Transportation Solutions



Efficiency in Automation - A reflection of our company philosophy

As an experienced specialist in automation technology, with solutions for flexible and high flexing cables, cable assemblies, interfaces, current control and cabinet wiring, we have had a focus on efficiency for many years.

LÜTZE defines Efficiency in Automation field as the use of sustainable products and solutions to further increase the performance of our products in our customers applications.

We realise this by using components for highly efficient control systems, products with above average life cycles and raising energy efficiency in control cabinets by means of the LSC wiring system.

Efficiency in Automation reflects our efforts in striving for efficient working relationships with our customers: in a medium sized family owned company we have short communcation channels and a high level of manufacturing competence.

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

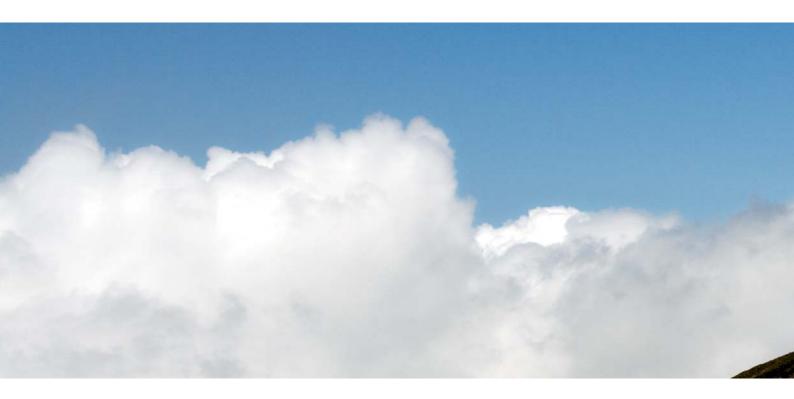
Thus LÜTZE creates value through efficiency. LÜTZE provides answers and demonstrates how to handle resources responsibly, with our environment and our future in mind. LÜTZE - Efficiency in Automation

For more information on our solutions, please visit www.luetze.com or www.lutze.com





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 and demonstrates how to handle resources responsibly, with our environment and our future in mind.











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

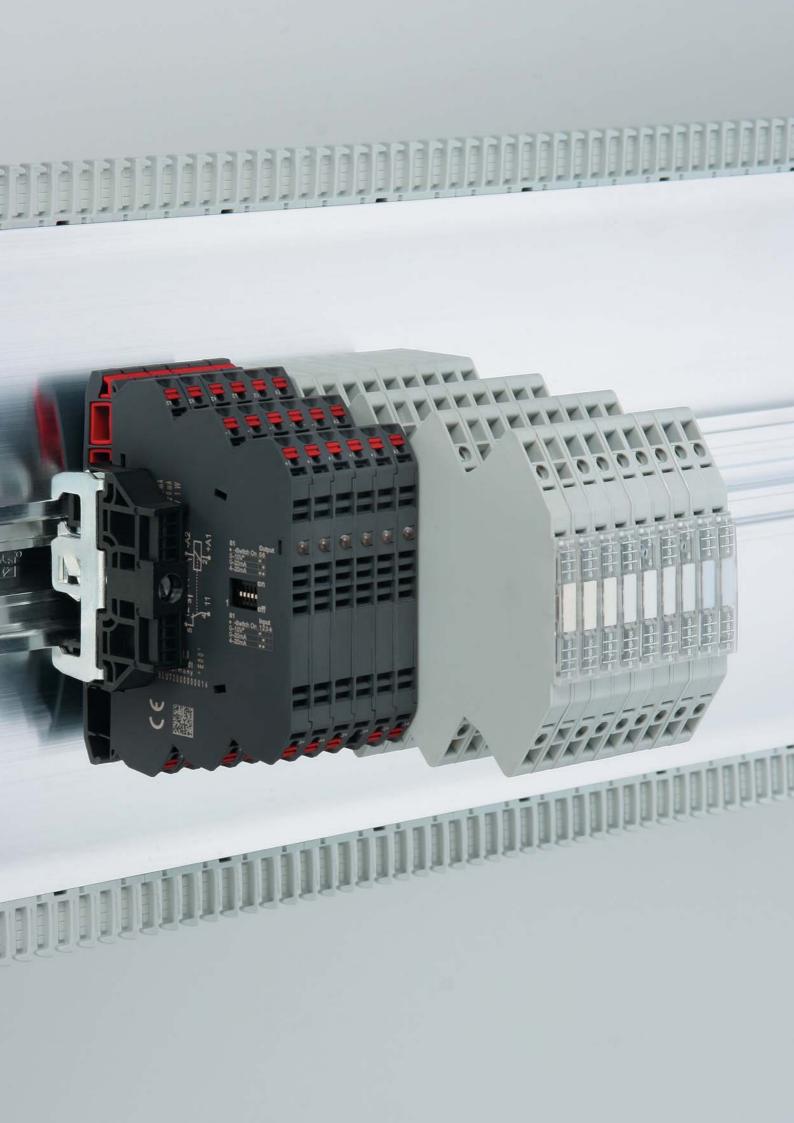
A prime example of competence in cables: In addition to manufacturing expertise, our cable assembly specialists are familiar with all cable types and offer genuine added value. The decisive advantage: We're cable experts – since 1958.











Signal Isolation Transformers · Product Overview

LCIS



Analog/analog converter passive



Analog/analog converter



Analog/analog converter



Analog/analog converter



Poti/analog converter



Analog/analog converter



Temperature/ analog converter

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LCON



Analog/analog converter



Temperature/ analog converter



Analog / limit value switch



Temperature / limit value switch



Analog/analog splitter



Analog/analog limit value switch

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Monitoring relays



Voltage monitoring, 1-phase



Voltage monitoring, 3-phase



Current monitoring, 1-phase, AC/DC 10 A



Current monitoring, 1-phase, AC/DC 100 A



Current monitoring in 3-phase networks, 1-phase, AC 5 A



Current monitoring in 3-phase networks, 3-phase, AC/DC 5 A



Load monitoring for 1- and 3-phase AC 480 V

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Load monitoring for 1- and 3-phase AC 690 V



Phase sequence and asymmetry

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Accessories



Labeling system



Insulated jumper combs



Insulated jumper combs

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Signal Isolation Transformers · 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:

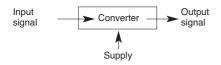


Figure: Schematic of a converter

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:

- •0 to 10 V
- •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 high-resistance:

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 RMS (root mean square) value indicates the value of a direct current or voltage which converts the same electrical energy - so also on average over time the same electrical power - on an ohmic converter in a representative period of time. 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 indicates the load capacity of the converter.

Signal Isolation Transformers · Basics

400 Ω to 750 $\Omega.$ The values for voltage outputs are in the range from 1 k Ω to 10 k $\Omega.$

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.

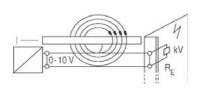
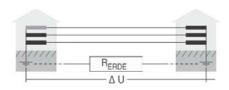


Figure: Electromagnetic interference

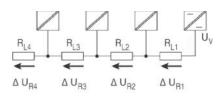
Potential differences

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 twisted-pair wires should additionally be used.

Isolation techniques

There are various way of isolating potential.

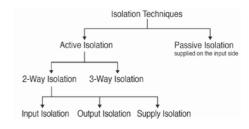


Diagram: Isolation techniques

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.

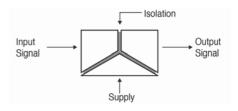


Diagram: 3-way isolation

Signal Isolation Transformers · 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.

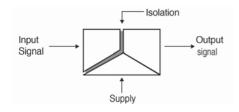


Figure: 2-way input isolation

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.

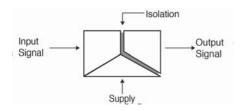


Figure: 2-way output isolation

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.

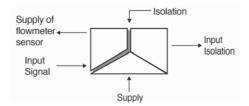


Figure: 2-way supply isolation

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).

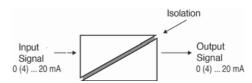


Figure: Passive isolation, supply input

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.

Open FDT Technology

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

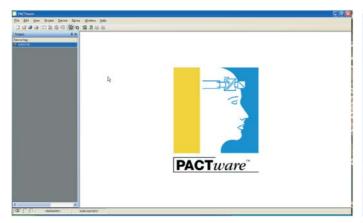
The Frame Application is a software program that implements Device DTMs and CommDTMs. The Frame Application provides:

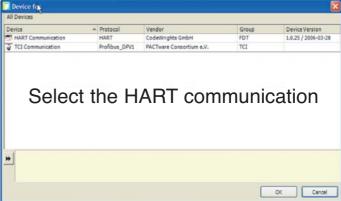
- · Common environment
- User Management
- DTM Management
- Data Management
- Network Configuration
- Navigation



Open FDT Technology

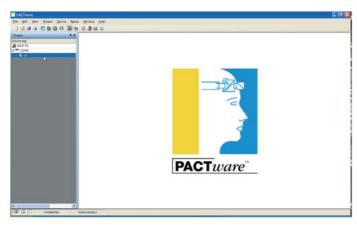
How to implement Lütze DTM's into PACTware PACTware

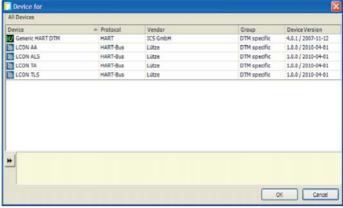




1. Add device



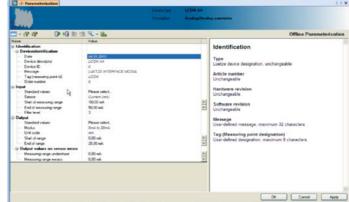




3. Again, add device

4. Select needed Lütze DTM





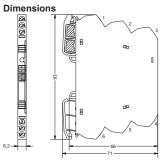
5. Device is displayed

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

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	passive	750528.0000	S*	LCIS-P1K-0528-62-S	1
Push-In					
Rated voltage	passive	751528.0000	S*	LCIS-P1K-1528-62-PI	1
Input	75052	8.0000		751528.0000	
Input signal			4-2	0 mA	
Galvanic isolation I/O		2-	way i	isolation	
Output					
Output signal			4-2	0 mA	
Max. load impedance at I-output		•	1000	$\Omega (R_B)$	
Output current				_	
Residual ripple		<5 mV _{eff} (lo	ad in	mpedance 100 Ω)	
Operating data					
Accuracy		0.1 9	6 FS	R @ 23 °C	
Linearity error				_	
Build-up time (Accuracy 1%)	6 r	ns (for working	resist	tance 500 Ω and 20 mA)	
General					
Rated voltage			pas	ssive	
Status indication	LED green				
Input/output protection	Suppressor diode (33 V)				
Burden error	<0.06 % from measured value / 100 Ω working resistance				
Temperature drift /K	<150 ppm / K FSR				
Temperature drift (working resistance >600R)		<10	0 ppr	m / K FSR	
Temperature drift (working resistance >600R)		<15	0 ppr	m / K FSR	
Insulation voltage input / output			1.5	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			IP	20	
Installation position				ny	
Connection device	ded wire with ferrule	al single wire 0.2 /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		-25	°C.	+60 °C	
Storage temperature range		-40	°C .	+80 °C	
Dimensions (w × h × d)		6.2 ×	93.0	× 71.0 mm	
Weight				kg/piece	
Approvals	cULus (E135145), DNV GL				
Standards	EN 60947-5-1				
Comments With connection: This passive isolat for an output interruption.	or has a non-reactive	transmission, s	so tha	at the current in the input circuit is not int	errup



Input: 0-10 V / 0-20 mA / 4-20 mA

Output: 0–10 kHz

Insulation: 2.5 kV, 3-way isolation

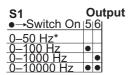


Dimensio	ons	
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	B	ш.
8		5 4
6,2	1 10 10	68
	-	73

PIN assig	nment		
I+∘— Input I- ∘—			—∘O+ Output —∘O-
	Ub∘	∘0√	/ Power

Range adjustment

S1	lı	ηp	u	t
◆Switch On	1	2	3	4
0-10 V*	•			
0–20 mA		•		
4–20 mA	•	•		

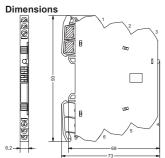


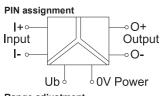
Description		Part-No.		Туре	PU
Screw terminal					
Rated voltage	AC/DC 24 V	750511.0000	R*	LCIS-WAF-0511-62-S	1
Push-In					
Rated voltage	AC/DC 24 V	751511.0000	S*	LCIS-WAF-1511-62-PI	1
5					
Input	7505	11.0000		751511.0000	
Input signal	0-10 V	/, 0–20 mA, 4–20	0 mA	, adjustable via DIP switch S1	
Input resistance	>30	00 kΩ @ 0–10 V	, <100	0 Ω @ 0–20 mA, 4–20 mA	
Galvanic isolation I/O		3.	-way	isolation	
Zero /Span		Produ	ction	comparison	
Output					
Output signal	0-50 Hz, 0-	100 Hz, 0–1 kHz	z, 0 – 1	0 kHz adjustable via DIP switch S1	
Residual ripple				-	
Operating data					
Accuracy		0.1 9	% FS	R @ 23 °C	
Linearity error			0.05	% FSR	
Build-up time (Accuracy 1%)				_	
Critical frequency		3	0 Hz	@ 3 dB	
Temperature coefficient		<15	б0 ррі	m / K FSR	
General					
Rated voltage			AC/D	C 24 V	
Operation voltage range		AC 19.2-	-30 V	/ DC 19.2–30 V	
Status indication			LED	green	
Input/output protection	Overvoltag	e, current input v	vith F	PTC fuse, short circuit-proof output	
Rise time (10 - 90%)		frequ	ency	-dependent	
Insulation voltage input / output			2.5	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			IF	20	
Installation position			а	iny	
Connection device	mm ² –2.5 mm ² / A ¹ ded wire with ferrul	al single wire 0.: WG 20–14 fine s e 0.25 mm ² –1.5 G 20–16	tran-	Push-In single wire 0.25 mm ² –2.5 mm AWG 20–14 fine stranded wire with ferrule 0.25 mm ² –1.5 mm ² / AWG 20 16	1
Operation temperature range		-25	5°C.	+60 °C	
Storage temperature range		-40	°C.	+85 °C	
Dimensions (w × h × d)	6.2 × 93.0 × 73.0 mm				
Weight	0.029 kg/piece				
Approvals				145), DNV GL	
Standards		E	N 60	947-5-1	

A Available with a lead timeR Available on request

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







Range adjustment

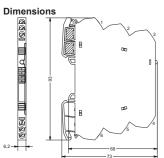
B		D. A.N.			ъ.,
Description		Part-No.		Туре	PU
Screw terminal	40/000414	750500 0000		1.010.1444.4.0500.00.0	
Rated voltage	AC/DC 24 V	750539.0000	S^	LCIS-WAA-0539-62-S	1
Push-In	40/000414	754500 0000		1 010 14/4 A 4500 00 BI	
Rated voltage	AC/DC 24 V	751539.0000	S^	LCIS-WAA-1539-62-PI	1
Immust	7505	39.0000		751539.0000	
Input			۸		
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	ction	comparison	
Output				DID 11 1 01	
Output signal		,		DIP switch S1	
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 n	nVeff _{eff}	
Operating data					
Accuracy		0.1 %	6 FS	R @ 23 °C	
Linearity error	0.05 % FSR				
Build-up time (Accuracy 1%)	17 ms				
Critical frequency	30 Hz @ 3 dB				
Temperature coefficient		<15	nqq 0	m/KFSR	
General					
Rated voltage		A	AC/D	C 24 V	
Operation voltage range		AC 19.2-	30 V	/ DC 19.2–30 V	
Status indication			LED	green	
Input/output protection	Overvoltage	e, current input w	/ith P	TC fuse, short circuit-proof output	
Rise time (10 - 90%)			6	ms	
Insulation voltage input / output			2.5	kV _{eff}	
Housing material		PA 6.6 (UI		V-0, NFF I2, F2)	
Color of the housing		RAL	7012	basalt grey	
Mounting		DIN rail mour	ntable	e TS35 (EN 60715)	
Protection class			IF	220	
Installation position			а	ny	
Connection device	mm ² –2.5 mm ² / AV ded wire with ferrule	VG 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	°C.	+60 °C	
Storage temperature range		-40	°C .	+80 °C	
Dimensions (w × h × d)	6.2 × 93.0 × 73.0 mm				
Weight	0.030 kg/piece				
Approvals				145), DNV GL	
Standards		•		947-5-1	

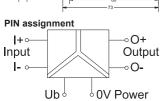


Input: 0-10 V

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	R*	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-PI	1
	0–20 mA	751531.0000		LCIS-WAA-1531-62-PI	1
	4–20 mA	751532.0000	S*	LCIS-WAA-1532-62-PI	1
Input			_		
Input signal				10 V	
Galvanic isolation I/O				isolation	
Zero /Span		Produ	iction	comparison	
Output	0 1011				
Output signal	0 – 10 V			0 mA 4–20 mA	
Residual ripple			<20 n	nVeff _{eff}	
Max. load impedance at I-output	-			500 Ω	
Operating data		0.44	· -0	D 0 00 00	
Accuracy				R @ 23 °C	
Linearity error				% FSR	
Build-up time (Accuracy 1%)				ms	
Critical frequency				@ 3 dB	
Temperature coefficient		<15	ou ppr	m / K FSR	
General			A O /D	0.04.1/	
Rated voltage				C 24 V	
Operation voltage range		AC 19.2-		/ DC 19.2–30 V	
Status indication	0			green	
Input/output protection	Overvoitage	e, current input v		TC fuse, short circuit-proof output	
Rise time (10 - 90%)				ms	
Insulation voltage input / output		DA C C (11		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				220	
Installation position	0	-1 -i1i 0 /		ny	2 ,
Connection device	mm ² –2.5 mm ² / AV ded wire with ferrule	NG 20-14 fine s	tran-	Push-In single wire 0.25 mm ² –2.5 mm 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		-40	°C.	+80 °C	
Dimensions (w × h × d)		6.2 ×	93.0	× 73.0 mm	
Weight	0.029 kg/piece				
Approvals		cULus (E135	145), DNV GL	
Standards	EN 60947-5-1				

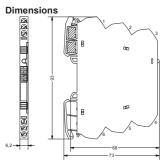


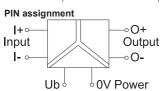
A Available with a lead time

Input: 0-20 mA

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







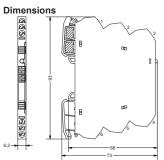
Description		Part-No.		Туре	PU
Screw terminal		r art-140.		туре	
Output signal	0 – 10 V	750533.0000	D*	LCIS-WAA-0533-62-S	1
Output signal	0=10 V 0=20 mA	750533.0000		LCIS-WAA-0534-62-S	1
	4–20 mA	750534.0000		LCIS-WAA-0535-62-S	1
Duch In	4–20 MA	750535.0000	K.	LCIS-WAA-0535-62-5	
Push-In	0 401/	754500 0000	0.0	1.010.14/4.4.4500.00.01	4
Output signal	0 – 10 V	751533.0000		LCIS-WAA-1533-62-PI	1
	0–20 mA	751534.0000		LCIS-WAA-1534-62-PI	1
	4–20 mA	751535.0000	S*	LCIS-WAA-1535-62-PI	1
Input					
Input signal		_		0 mA	
Galvanic isolation I/O				isolation	
Zero /Span		Produ	ıction	comparison	
Output					
Output signal	0 – 10 V			•	10 mA
Residual ripple			<20 n	nVeff _{eff}	
Max. load impedance at I-output	-			500 Ω	
Operating data					
Accuracy		0.1 9	% FS	R @ 23 °C	
Linearity error			0.05	% FSR	
Build-up time (Accuracy 1%)	17 ms				
Critical frequency	30 Hz @ 3 dB				
Temperature coefficient				m / K FSR	
General					
Rated voltage			AC/D	C 24 V	
Operation voltage range		AC 19.2-	-30 V	/ DC 19.2–30 V	
Status indication			LED	green	
Input/output protection	Overvoltage	e. current input v		PTC fuse, short circuit-proof out	put
Rise time (10 - 90%)		, , , , , , , , , , , , , , , , , , ,		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		2		220	
Installation position				iny	
Connection device	Screwed termin	al single wire 0 '		Push-In single wire 0.25 mm ²	-2.5 mm ² /
Commodicin dovice	mm ² –2.5 mm ² / A\ ded wire with ferrule	NG 20–14 fine s e 0.25 mm ² –1.5	stran-	AWG 20–14 fine stranded v ferrule 0.25 mm ² –1.5 mm ² /	wire with
	/ AWC	3 20–16		16	
Operation temperature range				+60 °C	
Storage temperature range				+80 °C	
Dimensions (w × h × d)				× 73.0 mm	
Weight	0.029 kg/piece				
Approvals	cULus (E135145), DNV GL				
Standards	EN 60947-5-1				

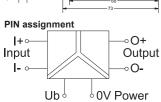


Input: 4-20 mA

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







Description		Part-No.		Туре	PU
Screw terminal		r urt-No.		1 9 0 0	
Output signal	0 – 10 V	750536.0000	R*	LCIS-WAA-0536-62-S	1
Cutput digital	0–20 mA	750537.0000		LCIS-WAA-0537-62-S	1
	4–20 mA	750538.0000		LCIS-WAA-0538-62-S	1
Push-In	1 20 111/1	700000.0000	•	2010 1771 0000 02 0	
Output signal	0 – 10 V	751536.0000	S*	LCIS-WAA-1536-62-PI	1
Cutput digital	0–20 mA	751537.0000		LCIS-WAA-1537-62-PI	1
	4–20 mA		_	LCIS-WAA-1538-62-PI	1
	. 201101	701000.000		20.0 17.1 1000 02.1	•
Input					
Input signal			4–2	0 mA	
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			<20 n	nVeff _{eff}	
Max. load impedance at I-output	_			500 Ω	
Operating data					
Accuracy	0.1 % FSR @ 23 °C				
Linearity error	0.15 % FSR				
Build-up time (Accuracy 1%)			17	ms	
Critical frequency	30 Hz @ 3 dB				
Temperature coefficient		<15	iqq 0	m / K FSR	
General			•		
Rated voltage			AC/D	C 24 V	
Operation voltage range		AC 19.2-	30 V	/ DC 19.2–30 V	
Status indication			LED	green	
Input/output protection	Overvoltage	e, current input v	vith F	PTC fuse, short circuit-proof output	
Rise time (10 - 90%)		<u> </u>		ms	
Insulation voltage input / output			2.5	kV _{eff}	
Housing material		PA 6.6 (U		V-0, NFF I2, F2)	
Color of the housing		RAL	7012	basalt grey	
Mounting		DIN rail mou	ntabl	e TS35 (EN 60715)	
Protection class			IF	20	
Installation position			а	iny	
Connection device	Screwed terminal single wire 0.25 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 20-14 fine stranded wire with ferrule 0.25 mm ² -1.5 mm ² / AWG 20-16 16				
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	cULus (E135145), DNV GL				
Standards	EN 60947-5-1				



A Available with a lead time

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



Dimensions		
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4 S O 9 5 S O 8 6 O O 7	The .	\nearrow
17,5	—	70
	-	75

PIN assign	gnment		
+ ∞	-		O+
Input			Output
- ⊶	//		O-
	Ub°	0)	/ Power
	OD -	- 01	/ Fower

Range adjustment				
S1	lı	ηp	u	t
→Switch On	1	2	3	4
0-10V*	•			
0-20mA		•		
4-20mA	•	•		

S1 •→Switch On			tpu
0-10V*	•		
0-20mA		•	
4-20mA	•	•	

Description		Part-No.		Туре	PU	
Screw terminal						
Rated voltage	AC/DC 24 V	750518.0000		LCIS-WAA-MA-0518-175-S	1	
	AC/DC 24-240 V	750519.0000	R*	LCIS-WP-WAA-MA-0519-S	1	
Push-In						
Rated voltage	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	>30	0 kΩ @ 0–10 V,	<100	0 Ω @ 0–20 mA, 4–20 mA		
Galvanic isolation I/O		3-	way i	isolation		
Zero /Span		Produ	ction	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				0 0–10 V		
Output current		max.	5 m/	A @ 0–10 V		
Output voltage				0 mA, 4–20 mA		
Residual ripple	<20 mVeff _{eff}					
Operating data				en en		
Accuracy	0.1 % FSR @ 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/D	C 24 V		AC/DC 24-240 V		
Operation voltage range	AC 19.2–30 V / DC 19.2–30 V					
Status indication	LED green					
Input/output protection	Overvoltage, current input with PTC fuse, short circuit-proof output					
Rise time (10 - 90%)	. 3	, ,		ms		
Insulation voltage input / output	2.5	kV _{eff}		4.0 kV _{eff}		
Housing material	PA 6.6 (UL 94 V-0, NFF I2, F2)					
Color of the housing	RAL 7012 basalt grey					
Mounting	DIN rail mountable TS35 (EN 60715)					
Protection class	IP20					
Installation position	any					
Connection device	Screwed termina	al single wire 0.2		Push-In single wire 0.25 mm ² –2.5 mm ²	2/	
	$mm^2 - 2.5 mm^2 / AV$					
	ded wire with ferrule	e 0.25 mm ² –1.5	mm ²	ferrule 0.25 mm ² -1.5 mm ² / AWG 20	_	
	/ AWG	G 20–16		16		
Operation temperature range				+60 °C		
Storage temperature range		-40	°C .	+80 °C		
Dimensions (w × h × d)		17.5 >	× 93.0) × 75.0 mm		
Weight	0.059 kg/piece					
Approvals	cULus (E135145), DNV GL					
Standards	EN 60947-5-1					



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



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PIN assig	nment		
l+ ∞— Input			O+ Output
-	Ub	0/	∘ 0 - / Power
Range ac	ljustmen	t	

ange adjustment				
S1	lı	ηp	u	t
→Switch On	1	2	3	4
0-10V*	•			
<u>0–20mA</u>		•		
4-20mA	•	•		

S1	C)u	tpu
→Switch On	5	6	١
0-10V*	•		
0-20mA		•	
4-20mA	•	•	

Screw terminal Rated voltage	Description		Dowt No.		Time	PU
Rated voltage	Description Second terminal		Part-No.		Туре	PU
Push-In Rated voltage AC/DC 24–240 V 751510.0000 S* LCIS-WP-WAA-1510-175-PI 1 Input 750510.0000 T51510.0000 Input signal 0–10 V, 0–20 mA, 4–20 mA, adjustable via DIP switch S1 1 Input resistance >300 kΩ @ 0–10 V, <100 Ω @ 0–20 mA, 4–20 mA General General Galvanic isolation I/O 3-way isolation Zero / Span Production comparison Output Output signal 0–10 V, 0–20 mA, 4–20 mA adjustable via switch Assistable via switch Max. load impedance at I-output 500 Ω @ 0–20 mA, 4–20 mA Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy Accuracy O.1 % FSR @ 23 °C Culinearity error Build-up time (Accuracy 1%) 17 ms Critical frequency 30 Hz @ 3 dB Temperature coefficient <150 ppm / K FSR General Rated voltage AC/DC 24–240 V Operation voltage range AC 19.2–264 V / DC 19.2–264 V Status indication LED green		AO/DO 04 040 \/	750540,0000	D÷	L OLO M/D M/A A 0540 475 C	4
Rated voltage		AC/DC 24-240 V	750510.0000	K"	LCIS-VVP-VVAA-0510-175-5	1
Input 750510.0000 751510.0000 T51510.0000 Input signal 0-10 V, 0-20 mA, 4-20 mA, adjustable via DIP switch S1 Input resistance >300 kΩ @ 0-10 V, <100 Ω @ 0-20 mA, 4-20 mA Galvanic isolation I/O 3-way isolation Zero /Span Production comparison Output Output signal 0-10 V, 0-20 mA, 4-20 mA Max. load impedance at I-output 500 Ω @ 0-20 mA, 4-20 mA Min. load impedance at U-output 2 kΩ @ 0-10 V Output current 0-10 V 0-20 mA, 4-20 mA Min. load impedance at U-output 2 kΩ @ 0-10 V Output voltage <18 V @ 0-20 mA, 4-20 mA Residual ripple <20 mVeff _{eff} Operating data Accuracy 0.1 % FSR @ 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 Rated voltage AC /DC 24-240 V Operation voltage range AC 19.2-264 V / DC 19.2-264 V Status indication LED green		40/D0 04 040 V	754540,0000	0.0	L 010 M/D M/A A 4540 475 DI	4
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Rated voltage	AC/DC 24-240 V	751510.0000	S^	LCIS-WP-WAA-1510-175-PI	1
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Innut	7505	10 0000		751510 0000	
Input resistance >300 kΩ @ 0−10 V, <100 Ω @ 0−20 mA, 4−20 mA	•) m /		
Galvanic isolation I/O 3-way isolation Zero /Span Production 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 mA, 4-20 mA Min. load impedance at U-output 2 kΩ @ 0-10 V Output current max. 5 mA @ 0-10 V Output voltage <18 V @ 0-20 mA, 4-20 mA Residual ripple <20 mVeff _{eff} Operating data Accuracy 0.1 % FSR @ 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/DC 24-240 V Operation voltage range AC 19.2-264 V / DC 19.2-264 V Status indication LED green	. 0		, ,		•	
Zero /Span Production 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 mA, 4–20 mA Min. load impedance at U-output 2 kΩ @ 0–10 V Output current max. 5 mA @ 0–10 V Output voltage <18 V @ 0–20 mA, 4–20 mA Residual ripple <20 mVeff _{eff} Operating data Accuracy 0.1 % FSR @ 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/DC 24–240 V Operation voltage range AC 19.2–264 V / DC 19.2–264 V Status indication LED green		>30				
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 mA, 4–20 mA Min. load impedance at U-output 2 kΩ @ 0–10 V Output current max. 5 mA @ 0–10 V Output voltage < 18 V @ 0–20 mA, 4–20 mA						
Output signal $0-10 \text{ V}$, $0-20 \text{ mA}$, $4-20 \text{ mA}$ adjustable via switch Max. load impedance at I-output $500 \Omega @ 0-20 \text{ mA}$, $4-20 \text{ mA}$ Min. load impedance at U-output $2 \text{ k}\Omega @ 0-10 \text{ V}$ Output current $2 \text{ max} \cdot 5 \text{ mA} @ 0-10 \text{ V}$ Output voltage $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Residual ripple $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Residual ripple $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Residual ripple $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Residual ripple $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Residual ripple $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Residual ripple $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Residual ripple $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Rated voltage $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Rated voltage $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Rated voltage range $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Rated voltage range $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Rated voltage range $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Rated voltage range $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Rated voltage range $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Rated voltage range $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Rated voltage range $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Rated voltage range $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Rated voltage range $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Rated voltage range $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA}$ Rated voltage range $3 \text{ max} \cdot 5 \text{ mA} \otimes 0-20 \text{ mA} \otimes 0-20 \text{ mA}$	· · · · · · · · · · · · · · · · · · ·		Produ	Ction	comparison	
$\begin{array}{llllllllllllllllllllllllllllllllllll$	•	2	40.17.0.00	4 00	A P. 4 11 2 24 1	
Min. load impedance at U-output $2 \ k\Omega \ @ \ 0-10 \ V$ Output current $max. 5 \ mA \ @ \ 0-10 \ V$ Output voltage $< 18 \ V \ @ \ 0-20 \ mA, \ 4-20 \ mA$ Residual ripple $< 20 \ mVeff_{eff}$ $Operating \ data$ $Accuracy 0.1 \ \% \ FSR \ @ \ 23 \ ^{\circ}C Linearity error 0.05 \ \% \ FSR Build-up time (Accuracy 1%) 17 \ ms Critical frequency 30 \ Hz \ @ \ 3 \ dB Temperature coefficient < 150 \ ppm \ / \ K \ FSR General Rated voltage AC/DC \ 24-240 \ V Operation voltage range AC \ 19.2-264 \ V \ DC \ 19.2-264 \ V Status indication LED \ green$	1 0	0-			,	
Output current max. 5 mA @ 0-10 V Output voltage < 18 V @ 0-20 mA, 4-20 mA					•	
Output voltage < 18 V @ 0–20 mA, 4–20 mA						
Residual ripple <20 mVeff _{eff} Operating data	•					
Operating data Accuracy 0.1 % FSR @ 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						
Accuracy 0.1 % FSR @ 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 Rated voltage AC/DC 24–240 V Operation voltage range AC 19.2–264 V / DC 19.2–264 V Status indication LED green	• • • • • • • • • • • • • • • • • • • •		•	<20 n	nVeff _{eff}	
Linearity error 0.05 % FSR Build-up time (Accuracy 1%) 17 ms Critical frequency 30 Hz @ 3 dB Temperature coefficient <150 ppm / K FSR	Operating data					
Build-up time (Accuracy 1%) 17 ms Critical frequency 30 Hz @ 3 dB Temperature coefficient <150 ppm / K FSR	Accuracy		0.1 9	% FS	R @ 23 °C	
Critical frequency 30 Hz @ 3 dB Temperature coefficient <150 ppm / K FSR			(0.05	% FSR	
Temperature coefficient < 150 ppm / K FSR General Rated voltage AC/DC 24–240 V Operation voltage range AC 19.2–264 V / DC 19.2–264 V Status indication LED green	Build-up time (Accuracy 1%)	17 ms				
General Rated voltage AC/DC 24–240 V Operation voltage range AC 19.2–264 V / DC 19.2–264 V Status indication LED green	Critical frequency	30 Hz @ 3 dB				
Rated voltage AC/DC 24–240 V Operation voltage range AC 19.2–264 V / DC 19.2–264 V Status indication LED green	Temperature coefficient					
Operation voltage range AC 19.2–264 V / DC 19.2–264 V Status indication LED green	General					
Status indication LED green	Rated voltage		AC	/DC 2	24–240 V	
3	Operation voltage range					
Input/output protection Overveltage current input with DTC fine short circuit proof cutout	Status indication					
impuroutput protection — Overvoitage, current input with PTO fuse, short circuit-proof output	Input/output protection	Overvoltage	e, current input v	vith P	PTC fuse, short circuit-proof output	
Rise time (10 - 90%) 6 ms	Rise time (10 - 90%)			6	ms	
Insulation voltage input / output 4.0 kV _{eff}				4.0	kV _{eff}	
Housing material PA 6.6 (UL 94 V-0, NFF I2, F2)						
· · · · · · · · · · · · · · · · · · ·		RAL 7012 basalt grey				
Mounting DIN rail mountable TS35 (EN 60715)	<u> </u>	0 ,				
• ,	· · ·	IP20				
Installation position any		· · · · · · · · · · · · · · · · · · ·				
Connection device Screwed terminal single wire 0.25 mm²-2.5 mm² / AWG 20-14 fine stran- ded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-16 Push-In single wire 0.25 mm²-2.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / ferrule 0.25 mm²-1.5 mm² / 16		mm ² –2.5 mm ² / A\ ded wire with ferrule	WG 20–14 fine s e 0.25 mm ² –1.5 i	25 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-	
Operation temperature range -25 °C +60 °C	Operation temperature range		-25	°C.	+60 °C	
Storage temperature range -40 °C +80 °C			-40	°C.	+80 °C	
Dimensions (w × h × d) 17.5 × 93.0 × 73.0 mm						
Weight 0.059 kg/piece	,					
Approvals CULus (E135145), DNV GL						
Standards EN 60947-5-1						



A Available with a lead timeR Available on request

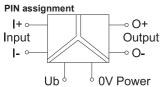
Input: 0-10 V / 0-20 mA / 4-20 mA

Output: 0–10 kHz

Insulation: 4 kV, 3-way isolation, Wide range input

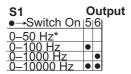


Dimensions		
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4 3 9 8 8 6 9 9 7	The .	\nearrow
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	1	15



Range adjustment

S1	Ir	ηp	u	t
◆Switch On	1	2	3	4
0-10 V*	•			
0-20 mA		•		
4–20 mA	•	•		



Description		Part-No.		Туре	PU
Screw terminal				21.	
Rated voltage	AC/DC 24-240 V	750512.0000	R*	LCIS-WP-WAF-0512-175-S	1
Push-In					
Rated voltage	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	ction	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			0.05	% FSR	
Build-up time (Accuracy 1%)	frequency-dependent				
Critical frequency	30 Hz @ 3 dB				
Temperature coefficient	<150 ppm / K FSR				
Transmission frequency		frequ	ency	-dependent	
General					
Rated voltage		AC	/DC	24–240 V	
Operation voltage range	AC 19.2–264 V / DC 19.2–264 V				
Status indication				green	
Input/output protection	Overvoltage			PTC fuse, short circuit-proof output	
Rise time (10 - 90%)	frequency-dependent				
Insulation voltage input / output	4.0 kV _{eff}				
Housing material				V-0, NFF I2, F2)	
Color of the housing	RAL 7012 basalt grey				
Mounting	DIN rail mountable TS35 (EN 60715)				
Protection class	IP20				
Installation position				ny	^
Connection device	Screwed termin mm ² –2.5 mm ² / AV	al single wire 0.2	25 tran-	Push-In single wire 0.25 mm ² –2.5 mm AWG 20–14 fine stranded wire with	
	ded wire with ferrule	e 0.25 mm ² –1.5 G 20–16	mm ²	ferrule 0.25 mm ² –1.5 mm ² / AWG 20)_
Operation temperature range	, , , , , , , , , , , , , , , , , , , ,		5 °C	+60 °C	
Storage temperature range				+80 °C	
Dimensions (w × h × d)	6.2 × 93.0 × 73.0 mm				
Weight				kg/piece	
Approvals	cULus (E135145), DNV GL				
Standards	EN 60947-5-1				
		_			

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



Dimensions	3	
1 A		
	3	
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4 3 9 8 8 6 9 9 7	The .	$\nearrow \nearrow$
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PIN assig	nment		
I+ ⊶ Input I- ⊶			—⊸ O+ Output —⊸ O-
	Ub $_{ ho}$	0/	/ Power

Range adjustment

S1	Ir	าต	u	t	
●→Switch On	1	2	3	4	
0-60 mV				П	
0-100 mV	•			П	
0-300 mV		•			
0-500 mV	•	•			
0–1 V			•		
<u>0–2 V</u>	•		•	Ш	
0-5 V		•	•	Ш	
<u>0–10 V*</u>	•	•	•	Ш	
<u>2–10 V</u>				•	
0–20 V	•			•	
<u>0–5 mA</u>		•		•	
<u>0–10 mA</u>	•	•		•	
<u>±5 mA</u>			•	•	
±20 mA	•		•		
0–20 mA		•	•		
4–20 mA	•	•	•		

S1 •→Switch On			tput
0-10 V*	•		
0–20 mA		•	
4-20 mA	•	•	

				_			
Description		Part-No.		Туре	PU		
Screw terminal							
Rated voltage	AC/DC 24 V	750516.0000	R*	LCIS-WUAA-0516-175-S	1		
	AC/DC 24-240 V	750517.0000	R*	LCIS-WP-WUAA-0517-175-S	1		
Push-In							
Rated voltage	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		C 24 V		AC/DC 24-240 V			
Input signal				nV adjustable via DIP switch S1			
				0 V adjustable via DIP switch S1			
	0-5, 0-10,			mA adjustable via DIP switch S1			
Input resistance				V, <100 Ω @ mA			
Galvanic isolation I/O				isolation			
Zero /Span		Produ	ction	comparison			
Output							
Output signal	0–1			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 r	nVeff _{eff}			
Operating data							
Accuracy				R @ 23 °C			
Linearity error				% FSR			
Build-up time (Accuracy 1%)			17	ms			
Critical frequency		3	0 Hz	@ 3 dB			
Temperature coefficient		<15	0 pp	m/KFSR			
General	AC/D	C 24 V		AC/DC 24-240 V			
Operation voltage range	AC 19.2-30 V	/ DC 19.2-30 V	'	AC 19.2-264 V / DC 19.2-264 V			
Status indication			LED	green			
Input/output protection	Overvoltage	e, current input v	vith F	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		RAL	7012	basalt grey			
Mounting		DIN ra	il mo	untable TS35			
Protection class			IF	20			
Installation position			а	iny			
Connection device		NG 20–14 fine s e 0.25 mm ² –1.5	tran-	ferrule 0.25 mm ² -1.5 mm ² / AWG 20			
Operation towns and the control of t	/ AVVC	3 20–16	• • •	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			



A Available with a lead time

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



Dimensions (Value of the content of

PIN assig	nment		
Pot.			O+ Output ○O-
T IT	Ubo	0/	/ Power

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

S1 Input			t	
• → Switch On	1	2	3	4
0–6 kΩ				
0–1 kΩ	•			

Approvals

Standards

Description		Part-No.		Туре	PU			
Screw terminal		T GIT TTO.		. , , , ,				
Rated voltage	AC/DC 24 V	750557.0000	R*	LCIS-WRA-0557-62-S	1			
Push-In	710/00 24 1	700007.0000		2010-11101-0001-02-0				
Rated voltage	AC/DC 24 V	751557.0000	S*	LCIS-WRA-1557-62-PI	1			
Taled Vollage	710/00 24 1	701007.0000	ŭ	2010-11101-02-11	·			
Input	750557.0000 751557.0000							
Input variable		Poti 0–1 kΩ. Poti 0–6 kΩ						
Galvanic isolation I/O		3-way isolation						
Measuring procedure	2-wire, constant current							
Zero /Span				comparison				
Input resistance			>1	ΜΩ				
Parameterisation		С	IP sv	vitch S1				
Sensor current		0,45 mA @ 0-	1 kΩ	/ 0,15 mA @ 0– 6 kΩ				
Protection device		Over	oltaq	e protection				
Output			J					
Output signal		0–10 V,	0-20	mA, 4–20 mA				
Max. load impedance at I-output				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				nA @ 10 V				
Residual ripple				nVeff _{eff}				
Parameterisation	DIP switch S1							
Protection device	short circuit protection							
Operating data				'				
Accuracy		0.3	% FS	R @ 23 °C				
Linearity error				6 FSR				
Build-up time (Accuracy 1%)		ca.	60 m	s @ 23 °C				
Critical frequency				3 dB / 23 °C				
Temperature coefficient			_	n / K FSR				
General								
Operation voltage range		AC 19.2-20	6.4 V	/ DC 18.0-31.2 V				
Rated voltage			AC/D	C 24 V				
Rated current	С	a. 22 mA @ AC	24 V	/ ca. 13 mA @ DC 24 V				
Status indication				green				
Insulation voltage input / output			2.5	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	20				
Installation position			а	ny				
Connection device	mm ² –2.5 mm ² / A' ded wire with ferrul		tran-	Push-In single wire 0.25 AWG 20–14 fine strate ferrule 0.25 mm ² –1.5 m 16	nded wire with			
Operation temperature range		-25	5°C.	+60 °C				
Storage temperature range		-40	°C.	+85 °C				
Dimensions (w × h × d)		6.2 ×	93.0	× 73.0 mm				
Weight		0	.030 I	kg/piece				



cULus in preparation, DNV GL in preparation

EN 60947-5-1

Output: 0-60 mV

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



Dimensions	6	
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PIN assig	nment		
I+∘— Input I- ∘—			∘O+ Output ∘O-
	∐h o	\ 0/V	/ Power

Range adjustment

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

	In				
Switch On	1	2	3	4	
0_60 mV					

Description		Part-No.		Туре	PU
Screw terminal					
Rated voltage	AC/DC 24 V	750901.0000	R*	LCIS-WAA-0901-62-S	1
Push-In					
Rated voltage	AC/DC 24 V	751901.0000	S*	LCIS-WAA-1901-62-PI	1
Input	75090	01.0000		751901.0000	
Input variable			tage	0–60 mV	
Galvanic isolation I/O			-	isolation	
Measuring procedure				easurement	
Zero /Span			_	comparison	
Input resistance		11000		ΜΩ	
Parameterisation		Г		vitch S1	
Sensor current			11 34	_	
Protection device		Over	oltan	ge protection	
Output		Overv	onag	je proteotion	
Output signal		0_10 \/	0_20) mA, 4–20 mA	
Max. load impedance at I-output		0-10 V,		0 Ω	
Min. load impedance at U-output				kO	
Load deviation		et II eutei		kΩ ix. 5 mV @ 2 kΩ	
Output voltage					
1 0	< 16 V @ 0–20 mA, 4–20 mA				
Output current	max. 5 mA @ 10 V <20 mVeff _{eff}				
Residual ripple Parameterisation					
	DIP switch S1				
Protection device	short circuit protection				
Operating data		0.4.0	/ 50	D @ 00 00	
Accuracy		0.1		R @ 23 °C	
Linearity error				6 FSR	
Build-up time (Accuracy 1%)				s @ 23 °C	
Critical frequency			\sim	3 dB / 23 °C	
Temperature coefficient		150) ppn	n / K FSR	
General		40.40.0		100 100 0101	
Operation voltage range				/ DC 18.0–31.2 V	
Rated voltage				C 24 V	
Rated current	C	a. 22 mA @ AC		/ ca. 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 mou		e TS35 (EN 60715)	
Protection class				P20	
Installation position				iny	,
Connection device	mm ² –2.5 mm ² / A\ ded wire with ferrule	al single wire 0.2 WG 20–14 fine s e 0.25 mm ² –1.5 G 20–16	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	
Operation temperature range	, , , , , ,		°C.	+60 °C	
Storage temperature range				+85 °C	
Dimensions (w × h × d)				× 73.0 mm	
Weight	0.030 kg/piece				
Approvals				DNV GL in preparation	
Standards			,	947-5-1	



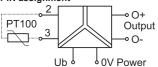
Input: PT100, 2-wire

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



Dimensions		
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PIN assignment



Range adjustment

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

S1	In	р	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	PU
Screw terminal					
Rated voltage	AC/DC 24 V	750809.0000	R*	LCIS-WPT2LA-0809-62-S	1
Push-In					
Rated voltage	AC/DC 24 V	751809.0000	S*	LCIS-WPT2LA-1809-62-PI	1
Input	7508	09.0000		751809.0000	
Input variable		Temper	ature	sensor PT100	
Galvanic isolation I/O		3-	way	isolation	
Measuring procedure		2-wire	, con	stant current	
Zero /Span		Produ	ction	comparison	
Input resistance			>1	ΜΩ	
Parameterisation			IP sv	vitch S1	
Temperature range	-50 °C–50 °C / -50			50 °C / 0 °C–100 °C / 0 °C–150 °C / 0 °C 0 °C / 0 °C–400 °C	; _
Sensor current			0.5	5 mA	
Protection device		Over	oltag/	ge protection	
Output					
Output signal		0–10 V,) mA, 4–20 mA	
Max. load impedance at I-output				0 Ω	
Min. load impedance at U-output				kΩ	
Load deviation		at U-outp	ut ma	ıx. 5 mV @ 2 kΩ	
Output voltage	< 16 V @ 0–20 mA, 4–20 mA				
Output current	max. 5 mA @ 10 V				
Residual ripple	<20 mVeff _{eff}				
Parameterisation	DIP switch S1				
Protection device	short circuit protection				
Operating data					
Accuracy		0.3 9		R @ 23 °C	
Linearity error				% FSR	
Build-up time (Accuracy 1%)				s @ 23 °C	
Critical frequency		10 H:	z @ 3	3 dB / 23 °C	
Temperature coefficient		150	o ppn	n / K FSR	
Error coefficient of measuring line			2.7	Κ/Ω	
General					
Operation voltage range				/ DC 18.0–31.2 V	
Rated voltage				C 24 V	
Rated current	C	a. 22 mA @ AC		/ ca. 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 mou		e TS35 (EN 60715)	
Protection class				P20	
Installation position				iny	, .
Connection device	mm ² –2.5 mm ² / A' ded wire with ferrul		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		-40	°C.	+85 °C	
Dimensions (w × h × d)		6.2 ×	93.0	× 73.0 mm	
Weight		0.	.030 I	kg/piece	
Approvals		cULus in prepara	ation,	DNV GL in preparation	
Standards		Е	N 60	947-5-1	



Input: PT100, 2-wire/3-wire

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



Dimension	ns	
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PIN assignment

PT100 2 2 3	Output
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Range	adj	justn	nent
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S1	O	u	tput
Switch On	5	6	-
0-10V	•		
0-20mA		•	
4–20mA	•	•	

S1	In	р	u'	t
• → Switch On			3	
PT100, 3-wire				
PT100, 2-wire	•			
-50 - 50°C				
-50 – 100°C		•		
-50 – 150°C			•	
<u>0 – 100°C</u>		•	•	
0 – 150°C				•
0 – 200°C		•		•
0 – 300°C			•	•
0 – 400°C		•	•	•

Description		Part-No.		Turna	PU
Description Screw terminal		Part-No.		Туре	FU
	AC/DC 24 V	750819.0000	D÷	LCIS-WPT3LA-0819-62-S	4
Rated voltage	AC/DC 24 V	750619.0000	K.	LCIS-WP13LA-0619-62-5	1
Push-In	AC/DC 24 V	754040 0000	C*	LCIC MDT2LA 4940 62 DI	1
Rated voltage	AC/DC 24 V	751819.0000	5"	LCIS-WPT3LA-1819-62-PI	1
Input	7508	319.0000		751819.0000	
Input variable			ature	sensor PT100	
Galvanic isolation I/O				isolation	
Measuring procedure				, constant current	
Zero /Span				comparison	
Input resistance				>500 kΩ @ 3-wire	
Parameterisation				vitch S1	
Temperature range	-50 °C-50 °C / -50	_		50 °C / 0 °C–100 °C / 0 °C–150 °C / 0 °	C-
	-00 0 00 07-00		C-30	0 °C / 0 °C–400 °C	
Sensor current				5 mA	
Protection device		Över	/oltag	e protection	
Output					
Output signal		0–10 V,		mA, 4–20 mA	
Max. load impedance at I-output				0 Ω	
Min. load impedance at U-output				kΩ	
Load deviation				x. 5 mV @ 2 kΩ	
Output voltage	< 16 V @ 0–20 mA, 4–20 mA				
Output current	max. 5 mA @ 10 V				
Residual ripple	<20 mVeff _{eff}				
Parameterisation				vitch S1	
Protection device		short	circu	it protection	
Operating data					
Accuracy		0.3 9		R @ 23 °C	
Linearity error				6 FSR	
Build-up time (Accuracy 1%)				s @ 23 °C	
Critical frequency				3 dB / 23 °C	
Temperature coefficient				n / K FSR	
Error coefficient of measuring line	2-c	onductor: 2.7 K/0	Ω, 3-c	conductor: 0.1 K + 0.1 %/Ω	
General					
Operation voltage range				/ DC 18.0–31.2 V	
Rated voltage			AC/D	C 24 V	
Rated current		ca. 22 mA @ AC		/ ca. 13 mA @ DC 24 V	
Status indication			LED	green	
Insulation voltage input / output				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		e TS35 (EN 60715)	
Protection class			IF	220	
Installation position				ny	
Connection device	mm ² –2.5 mm ² / A ded wire with ferru	nal single wire 0.2 AWG 20–14 fine s Ile 0.25 mm ² –1.5 /G 20–16	tran-	Push-In single wire 0.25 mm ² –2.5 mm AWG 20–14 fine stranded wire with ferrule 0.25 mm ² –1.5 mm ² / AWG 20 16	1
Operation temperature range		-25	5°C.	+60 °C	
Storage temperature range		-40	°C.	+85 °C	
Dimensions (w × h × d)		6.2 ×	93.0	× 73.0 mm	
Weight	0.030 kg/piece				
Approvals		cULus in prepara	ation,	DNV GL in preparation	
Standards				947-5-1	

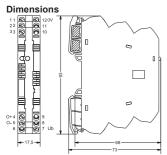


A Available with a lead time

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 2	Output Output

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				lacksquare
0 – 200°C		•		
0 – 300°C			•	
0 – 400°C		•	•	

Standards

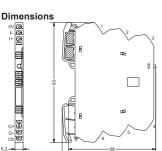
Description		Part-No.		Туре	PU
Screw terminal					
Rated voltage	AC/DC 24-240 V	750817.0000	R*	LCIS-WP-WPT3LA-0817-175-S	1
Push-In					
Rated voltage	AC/DC 24-240 V	751817.0000	S*	LCIS-WP-WPT3LA-1817-175-PI	1
Input	75081	7.0000		751817.0000	
Input variable		•		sensor PT100	
Galvanic isolation I/O				isolation	
Measuring procedure				, constant current	
Zero /Span				comparison	
Input resistance				>500 kΩ @ 3-wire	
Parameterisation	E0°C E0°C / E0°			witch S1 50 °C / 0 °C–100 °C / 0 °C–150 °C / 0 °C-	
Temperature range	-50 C-50 C7-50		C-30	0 °C / 0 °C–400 °C	_
Sensor current				5 mA	
Protection device		Over	/oltag	ge protection	
Output		0.401/	0.00) m A A 20 m A	
Output signal		0–10 V,) mA, 4–20 mA	
Max. load impedance at I output				00 Ω	
Min. load impedance at U-output		2 kΩ			
Load deviation				output	
Output voltage				nV @ 2 kΩ 0 mA, 4–20 mA	
Output current	max. 5 mA @ 10 V				
Residual ripple				nVeff _{eff}	
Parameterisation				witch S1	
Protection device		short	circu	iit protection	
Operating data				·	
Accuracy		0.3	% FS	R @ 23 °C	
Linearity error			0.1 9	% FSR	
Build-up time (Accuracy 1%)		ca.	60 m	s @ 23 °C	
Critical frequency		10 H:	z @ 3	3 dB / 23 °C	
Temperature coefficient		150) ppn	n/KFSR	
Error coefficient of measuring line	2-cor	nductor: 2.7 K/g	Ω, 3-c	conductor: 0.1 K + 0.1 %/Ω	
General					
Operation voltage range		AC 19,2-2	64 V	/ DC 18,0-264 V	
Rated voltage		AC	/DC	24–240 V	
Rated current	Ca	a. 22 mA @ AC	24 V	/ ca. 19 mA @ DC 24 V	
Status indication				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				basalt grey	
Mounting		DIN rail mou		e TS35 (EN 60715)	
Protection class				P20	
Installation position				iny	
Connection device		VG 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				+60 °C	
Storage temperature range		-40	°C.	+85 °C	
Dimensions (w × h × d)		17.5	× 93.0	0 × 73.0 mm	
Weight		0	.059	kg/piece	
Approvals	С	ULus in prepara	ation,	DNV GL in preparation	
Standards			NI GO	947-5-1	



EN 60947-5-1

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





PIN assignr	nent		
TC			⊸O+ Output ⊸O-
	ΠΡΥ	9 0 N I	⊃ower

Range adjustment	
S1	Output

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

		р		
• → Switch On	1	2	3	4
TC J (Fe-CuNi)				
TC K (Ni-CrNi)	•			
-50 – 200°C				
-50 - 350°C		•		
0 – 200°C			•	
<u>0 – 400°C</u>		•	•	
0 – 600°C				•
0 – 800°C		•		•
0 – 1000°C			•	•
0 – 1200°C		•	•	•

Screw terminal Rated voltage	Description		Part-No.		Туре	PU
AC/DC 24 V 750839.0000 R* LCIS-WTCA-0839-62-S 1	Screw terminal				. 3 6 -	
Push-In		AC/DC 24 V	750839.0000	R*	LCIS-WTCA-0839-62-S	1
Input T50839.0000 S* LCIS-WTCA-1839-62-Pl 1	Push-In					•
	Rated voltage	AC/DC 24 V	751839.0000	S*	LCIS-WTCA-1839-62-PI	1
	<u> </u>					
Galvanic Isolation I/O 3-way Isolation Measuring procedure Voltage measurement Zero /Span Production comparison Input resistance >1 MΩ Parameterisation DIP switch S1 Temperature range -50 °C-200 °C / -50 °C-350 °C / 0 °C-200 °C / 0 °C-400 °C / 0 °C-800 °C / 0 °C	Input	75083	39.0000		751839.0000	
Measuring procedure	Input variable	Th	ermo voltage, e	emer	nt J or K (DIN/IEC 584-1)	
Production comparison Production comparison Injurt resistance >1 MΩ	Galvanic isolation I/O		3-	way i	isolation	
Input resistance	Measuring procedure		Volta	ge me	easurement	
Parameterisation	Zero /Span		Produ	ction	comparison	
Temperature range -50 °C-200 °C / -50 °C-200 °C / 0 °C-400 °C / 0 °C-400 °C / 0 °C- 800 °C -400 °C / 0 °C-400 °C / 0 °C- 800 °C -400 °C / 0 °C-400 °C / 0 °C- 800 °C -400 °C / 0 °C-400 °C / 0 °C- 800 °C -400 °C / 0 °C-400 °C / 0 °C- 800 °C -400 °C / 0 °C -400 °C /0 °C -400 °C	Input resistance			>1	ΜΩ	
800 °C / 0 °C-100 °C / 0 °C-1200 °C	Parameterisation		С	IP sv	vitch S1	
Protection device Overvoltage protection	Temperature range	-50 °C–200 °C / -50				
Output Output signal 0-10 V, 0-20 mA, 4-20 mA Max. load impedance at I-output 500 Ω Min. load impedance at U-output 2 kΩ Load deviation at U-output max. 5 mV @ 2 kΩ Output voltage < 16 V @ 0-20 mA, 4-20 mA	Cold junction compensation		throughout the	entir	e temperature range	
Output signal 0-10 V, 0-20 mA, 4-20 mA Max. load impedance at I-output 500 Ω Min. load impedance at U-output 2 kΩ Load deviation at U-output max. 5 mV @ 2 kΩ Output voitage < 16 V @ 0-20 mA, 4-20 mA	Protection device		Over	oltag	e protection	
Max. load impedance at I-output 2 kΩ Load deviation at U-output max. 5 mV @ 2 kΩ Output voltage < 16 V @ 0-20 mA, 4-20 mA	Output					
Min. load impedance at U-output	Output signal		0–10 V,	0-20	mA, 4–20 mA	
Load deviation	Max. load impedance at I-output					
Output voltage < 16 V @ 0−20 mA, 4−20 mA	Min. load impedance at U-output			2	kΩ	
Output current max. 5 mA @ 10 V Residual ripple < 20 mVeffer Parameterisation DIP switch S1 Protection device short circuit protection Operating data Accuracy 0.5 % + 2 K FSR @ 23 °C Linearity error 0.1 % FSR, temperature linear Build-up time (Accuracy 1%) ca. 60 ms @ 23 °C Critical frequency 10 Hz @ 3 dB / 23 °C Temperature coefficient 150 ppm / K FSR Transmission frequency - General - Operation voltage range AC 19.2–26.4 V / DC 18.0–31.2 V Rated current ca. 22 mA @ AC 24 V / ca. 13 mA @ DC 24 V Status indication LED green Insulation voltage input / output 2.5 kV-gr Housing material PA 6.6 (UL 94 V-0, NFF 12, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position Screwed terminal single wire 0.25 mm² – 1.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm² – 1.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm² – 1.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mc² – 1	Load deviation	at U-output max. 5 mV @ 2 kΩ				
Residual ripple	Output voltage	< 16 V @ 0–20 mA, 4–20 mA				
Parameterisation Protection device short circuit protection Operating data Accuracy 0.5 % + 2K FSR @ 23 °C Linearity error 0.1 % FSR, temperature linear Build-up time (Accuracy 1%) ca. 60 ms @ 23 °C Critical frequency 10 Hz @ 3 dB / 23 °C Critical frequency 150 ppm / K FSR Transmission frequency ———————————————————————————————————	Output current	max. 5 mA @ 10 V				
Protection device	Residual ripple	<20 mVeff _{eff}				
Accuracy 0.5 % + 2K FSR @ 23 °C Linearity error 0.1 % FSR, temperature linear Build-up time (Accuracy 1%) Critical frequency 10 Hz @ 3 dB / 23 °C Critical frequency 150 ppm / K FSR Transmission frequency General Operation voltage range AC 19.2–26.4 V / DC 18.0–31.2 V Rated voltage Rated voltage Rated current Ca. 22 mA @ AC 24 V / ca. 13 mA @ DC 24 V Status indication Insulation voltage input / output Housing material PA 6.6 (UL 94 V-0, NFF I2, F2) Color of the housing Mounting Portection class Installation position Connection device Screwed terminal single wire 0.25 mm²-2.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20–15 mm² - 1.5 mm² / AWG 20–16 Operation temperature range Connection (w × h × d) 0.030 kg/piece Approvals CULus in preparation, DNV GL in preparation	Parameterisation		D	IP sv	vitch S1	
Accuracy Linearity error D.1 % FSR, temperature linear Build-up time (Accuracy 1%) Ca. 60 ms @ 23 °C Critical frequency Temperature coefficient Transmission frequency General Operation voltage range AC 19.2–26.4 V / DC 18.0–31.2 V Rated voltage AC/DC 24 V Rated voltage AC/DC 24 V Rated voltage AC/DC 24 V Rated ourrent Ca. 22 mA @ AC 24 V / ca. 13 mA @ DC 24 V Status indication ILED green Insulation voltage input / output Housing material PA 6.6 (UL 94 V-0, NFF I2, F2) Color of the housing Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position Connection device Screwed terminal single wire 0.25 mm²-2.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-2.5 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-16 Operation temperature range Coperation temperature range LED green L	Protection device		short	circu	it protection	
Linearity error Build-up time (Accuracy 1%) Critical frequency 10 Hz @ 3 dB / 23 °C Critical frequency 150 ppm / K FSR Transmission frequency General Operation voltage range AC 19.2–26.4 V / DC 18.0–31.2 V Rated voltage Rated current Ca. 22 mA @ AC 24 V / ca. 13 mA @ DC 24 V Status indication Insulation voltage input / output Housing material PA 6.6 (UL 94 V-0, NFF I2, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position Connection device Screwed terminal single wire 0.25 mm²-2.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-16 Operation temperature range Coperation temperature range Storage temperature range Figure 1.5 mm² - 2.5 °C +60 °C Color of the vival	Operating data					
Build-up time (Accuracy 1%) Ca. 60 ms @ 23 °C	Accuracy		0.5 % -	- 2K I	FSR @ 23 °C	
Critical frequency 10 Hz @ 3 dB / 23 °C Temperature coefficient 150 ppm / K FSR Transmission frequency — General — Operation voltage range AC 19.2–26.4 V / DC 18.0–31.2 V Rated voltage AC/DC 24 V Rated current ca. 22 mA @ AC 24 V / ca. 13 mA @ DC 24 V Status indication LED green Insulation voltage input / output 2.5 kVeff Housing material PA 6.6 (UL 94 V-O, NFF 12, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position any Connection device Screwed terminal single wire 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-16 Operation temperature range -25 °C +60 °C Storage temperature range -40 °C +85 °C Dimensions (w × h × d) 6.2 × 93.0 × 73.0 mm Weight 0.030 kg/piece Approvals	Linearity error		0.1 % FS	R, tei	mperature linear	
Temperature coefficient Transmission frequency General Operation voltage range Rated voltage Rated current Status indication Insulation voltage input / output Housing material Color of the housing Mounting Protection class Installation position Connection device Screwed terminal single wire 0.25 More and wire with ferrule 0.25 mm² – 1.5 mm² / AWG 20–16 Operation voltage input / output RAL 7012 basalt grey DIN rail mountable TS35 (EN 60715) Push-In single wire 0.25 mm² – 2.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm² – 1.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm² – 1.5 mm² / AWG 20–16 Operation temperature range Operation temperature range -25 °C +60 °C -25 °C +60 °C -25 °C +85 °C Dimensions (w × h × d) Operation temperature range -40 °C +85 °C Dimensions (w × h × d) Operation temperature range Operation temperature range -40 °C +85 °C Dimensions (w × h × d) Operation temperature range Operation temperature range -40 °C +85 °C Dimensions (w × h × d) Operation temperature range -40 °C +85 °C Cultus in preparation, DNV GL in preparation	Build-up time (Accuracy 1%)		ca.	60 ms	s @ 23 °C	
Companies	Critical frequency		10 H	z @ 3	3 dB / 23 °C	
Operation voltage range AC 19.2–26.4 V / DC 18.0–31.2 V Rated voltage AC/DC 24 V Rated current ca. 22 mA @ AC 24 V / ca. 13 mA @ DC 24 V Status indication LED green Insulation voltage input / output PA 6.6 (UL 94 V-0, NFF I2, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position any Connection device Screwed terminal single wire 0.25 mm²-2.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² ferrule 0.25 mm²-1.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20–16 Operation temperature range -40 °C +85 °C Dimensions (w × h × d) 6.2 × 93.0 × 73.0 mm Weight 0.030 kg/piece Approvals	Temperature coefficient		150) ppn	n / K FSR	
Operation voltage range AC 19.2–26.4 V / DC 18.0–31.2 V Rated voltage AC/DC 24 V Rated current ca. 22 mA @ AC 24 V / ca. 13 mA @ DC 24 V Status indication LED green Insulation voltage input / output 2.5 kV _{eff} Housing material PA 6.6 (UL 94 V-0, NFF I2, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position any Connection device Screwed terminal single wire 0.25 mm² - 1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-15 mr²-1.5 mm² / AWG 20-16 mr²-1.5 mm² / AWG 20-16 mr²-1.5 mm² / AWG 20-16 mr²-1.5 mr² / AWG 20-16 mr²-1.5 mr²-1.5 mr² / AWG 20-16 mr²-1.5 mr²	Transmission frequency				_	
Rated voltage AC/DC 24 V Rated current ca. 22 mA @ AC 24 V / ca. 13 mA @ DC 24 V Status indication LED green Insulation voltage input / output 2.5 kV _{eff} Housing material PA 6.6 (UL 94 V-0, NFF I2, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position any Connection device Screwed terminal single wire 0.25 mm² - 1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-16 Operation temperature range -25 °C +60 °C Storage temperature range -40 °C +85 °C Dimensions (w × h × d) 6.2 × 93.0 × 73.0 mm Weight 0.030 kg/piece Approvals cULus in preparation, DNV GL in preparation	General					
Rated current Ca. 22 mA @ AC 24 V / ca. 13 mA @ DC 24 V Status indication LED green Insulation voltage input / output 2.5 kV _{eff} Housing material PA 6.6 (UL 94 V-0, NFF I2, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position Connection device Screwed terminal single wire 0.25 mm² - 1.5 mm² AwG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-16 Operation temperature range -40 °C +85 °C Dimensions (w × h × d) 6.2 × 93.0 × 73.0 mm Weight Output Output Average temperature Output	Operation voltage range		AC 19.2-26	6.4 V	/ DC 18.0–31.2 V	
Status indication Insulation voltage input / output Housing material Color of the housing Mounting Portection class Installation position Connection device Screwed terminal single wire 0.25 Mounting Pounting many Connection device Screwed terminal single wire 0.25 Mounting Screwed terminal single wire 0.25 Mounting Screwed terminal single wire 0.25 Mounting AwG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20–16 Operation temperature range AwG 20–16 Operation temperature range -40 °C +60 °C -40 °C +85 °C Dimensions (w × h × d) Oo30 kg/piece Approvals CULus in preparation, DNV GL in preparation	Rated voltage			AC/D	C 24 V	
Insulation voltage input / output	Rated current	Ca	a. 22 mA @ AC	24 V	/ ca. 13 mA @ DC 24 V	
PA 6.6 (UL 94 V-0, NFF I2, F2)	Status indication			LED	green	
Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position Connection device Screwed terminal single wire 0.25 mm²-2.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² ded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-15 mm²-1.5 mm² / AWG 20-16 Operation temperature range -25 ° C +60 ° C Storage temperature range -40 ° C +85 ° C Dimensions (w × h × d) 6.2 × 93.0 × 73.0 mm Weight 0.030 kg/piece Approvals	Insulation voltage input / output			2.5	kV _{eff}	
Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position Connection device Screwed terminal single wire 0.25 mm²-2.5 mm² / AWG 20-14 fine stranded wire with ded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-16 Operation temperature range -25 °C +60 °C Storage temperature range -40 °C +85 °C Dimensions (w × h × d) 6.2 × 93.0 × 73.0 mm Weight 0.030 kg/piece Approvals	Housing material		PA 6.6 (U	L 94 '	V-0, NFF I2, F2)	
Protection class IP20 Installation position Screwed terminal single wire 0.25 mm²-2.5 mm²-2.5 mm²-2.5 mm²-2.5 mm²-1.5 mm²-2.5 mm²-1.5 mm²-2.5 mm²-1.5	Color of the housing					
Installation position Connection device Screwed terminal single wire 0.25 mm²-2.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-16 Operation temperature range Storage temperature range -40 °C +85 °C Dimensions (w × h × d) 6.2 × 93.0 × 73.0 mm Weight 0.030 kg/piece Approvals Approvals	Mounting		DIN rail mou	ntable	e TS35 (EN 60715)	
Connection device $ \begin{array}{c} Screwed \ terminal \ 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 \ 20-14 \ fine \ stranded \ wire \ with \ ferrule \ 0.25 \ mm^2-1.5 \ mm^2 \ / \ AWG \ 20-14 \ fine \ stranded \ wire \ with \ ferrule \ 0.25 \ mm^2-1.5 \ mm^2 \ / \ AWG \ 20-16 \\ Operation \ temperature \ range \\ Storage \ temperature \ range \\ Operation \ temperature \ range \\ Storage \ temperature \ range \\ Operation \ temperature \ r$	Protection class					
mm²-2.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² ferrule 0.25 mm²-1.5 mm² / AWG 20–16 Operation temperature range	Installation position				•	
Storage temperature range -40 °C +85 °C Dimensions (w × h × d) 6.2 × 93.0 × 73.0 mm Weight 0.030 kg/piece Approvals cULus in preparation, DNV GL in preparation	Connection device	mm ² –2.5 mm ² / AV ded wire with ferrule	NG 20–14 fine s e 0.25 mm ² –1.5	tran-	AWG 20–14 fine stranded wire with ferrule 0.25 mm ² –1.5 mm ² / AWG 20–	
Storage temperature range -40 °C +85 °C Dimensions (w × h × d) 6.2 × 93.0 × 73.0 mm Weight 0.030 kg/piece Approvals cULus in preparation, DNV GL in preparation	Operation temperature range		-25	°C.	+60 °C	
Weight 0.030 kg/piece Approvals cULus in preparation, DNV GL in preparation	Storage temperature range		-40	°C .	+85 °C	
Weight 0.030 kg/piece Approvals cULus in preparation, DNV GL in preparation	Dimensions (w × h × d)		6.2 ×	93.0	× 73.0 mm	
Approvals cULus in preparation, DNV GL in preparation	Weight		0.	030 k	kg/piece	
Standards EN 60947-5-1	Approvals	C			0.	
	Standards		E	N 60	947-5-1	

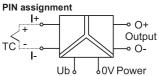


Input: Thermal elements J, K

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



Dimensions	
1 A & 12 0V I- 2 A A 11 I+ 3 O O 10	
	3
0+ 4 S 9 9 0- 5 9 9 8	
17,5-	68
	73



Range adjustment

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

S1	In	р	u	t
Switch On	1	2	3	4
TC J (Fe-CuNi)				
TC K (Ni-CrNi)	•			
-50 – 200°C				
-50 – 350°C		•		
0 – 200°C			•	
0 – 400°C		•	•	
0 – 600°C				•
0 – 800°C		•		•
0 – 1000°C			•	•
0 – 1200°C		•	•	

Rated voltage	Description		Part-No.		Туре	PU	
Push-In order AC/DC 24–240 V 751847.0000 S* LCIS-WP-WTCA-1847-175-PI 1 Input Input 750847.0000 Total Art.0000 Total Art.0000 Total Art.0000 Total Art.0000 Input cash are a second and a second are a second and a second an	Screw terminal						
Input 750847.0000 751847.00000 751847.00000 751847.00000 751847.00000 751847.00000 751847.00000 751847.00000	Rated voltage	AC/DC 24-240 V	750847.0000	R*	LCIS-WP-WTCA-0847-175-S	1	
Input 750847.0000 751847.0000 1put variable Thermo voltage, element J or K (DIN/IEC 584-1) 3-way isolation Moassuring procedure Voltage measurement Zero /Span Production comparison Input resistance >1 MΩ DIP switch \$1 Temperature range -50 °C - 200 °C / 50 °C - 350 °C / 0 °C - 200 °C /	Push-In						
Input variable	Rated voltage	AC/DC 24-240 V	751847.0000	S*	LCIS-WP-WTCA-1847-175-PI	1	
Input variable							
Galvanic isolation I/O 3-way isolation Measuring procedure Voltage measurement	Input	75084	17.0000		751847.0000		
Measuring procedure Voltage measurement	Input variable	Th	ermo voltage, e	lemer	nt J or K (DIN/IEC 584-1)		
Production comparison	Galvanic isolation I/O		3-	way i	isolation		
Input resistance	Measuring procedure		Volta	ge me	easurement		
Parameterisation	Zero /Span		Produ	ction	comparison		
Temperature range -50 °C-200 °C / -50 °C-200 °C / 0 °C-200 °C / 0 °C-400 °C / 0 °C-600 °C / 0 °C-1000 °C /0	Input resistance			>1	ΜΩ		
800 °C / 0 °C -1200 °C / 0	Parameterisation			IP sv	vitch S1		
Protection device Overvoltage protection Output Output signal	Temperature range	-50 °C–200 °C / -50				; –	
Output Output signal 0-10 V, 0-20 mA, 4-20 mA Max. load impedance at I-output 500 Ω Min. load impedance at U-output 2 kΩ Load deviation at U-output max. 5 mV @ 2 kΩ Output voltage < 18 V @ 0-20 mA, 4-20 mA	Cold junction compensation		throughout the	entir	e temperature range		
Output signal 0-10 V, 0-20 mA, 4-20 mA Max. load impedance at I-output 500 Ω Min. load impedance at U-output 2 kΩ Load deviation at U-output max. 5 mV @ 2 kΩ Output voltage < 18 V @ 0-20 mA, 4-20 mA	Protection device		Overv	/oltag	e protection		
Max. load impedance at I-output 500 Ω Min. load impedance at U-output 2 kΩ Load deviation at U-output max. 5 mV @ 2 kΩ Output voltage < 18 V @ 0-20 mA, 4-20 mA Output current max. 5 mA @ 10 V Residual ripple <20 mVeff _{eff} Parameterisation DIP switch S1 Protection device short circuit protection Operating data Accuracy 0.5 % + 2K FSR @ 23 °C Clinearity error 0.1 % FSR, temperature linear Build-up time (Accuracy 1%) ca. 60 ms @ 23 °C Critical frequency 10 Hz @ 3 dB / 23 °C Temperature coefficient 150 ppm / K FSR Transmission frequency - General AC 19,2-264 V / DC 18,0-264 V Queration voltage range AC 19,2-264 V / DC 18,0-264 V Rated voltage AC 24 V / V ca. 19 mA @ DC 24 V Status indication LED green Insulation voltage input / output 4.0 kV _{eff} Housing material PA 6.6 (IU. 94 V-0, NFF I2, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable T	Output						
Min. load impedance at U-output	Output signal		0-10 V,	0-20	mA, 4–20 mA		
Load deviation	Max. load impedance at I-output			50	0 Ω		
Output voltage < 18 V @ 0-20 mA, 4-20 mA	Min. load impedance at U-output			2	kΩ		
Output current max. 5 mA @ 10 V Residual ripple <20 mVeff _{eff} Parameterisation DIP switch S1 Protection device short circuit protection Operating data Accuracy 0.5 % + 2K FSR @ 23 °C Accuracy 0.1 % FSR, temperature linear Build-up time (Accuracy 1%) ca. 60 ms @ 23 °C Critical frequency 10 Hz @ 3 dB / 23 °C Critical frequency 10 Hz @ 3 dB / 23 °C Transmission frequency - Temperature coefficient 150 ppm / K FSR Transmission frequency - General - Operation voltage range AC 19,2–264 V / DC 18,0–264 V Rated voltage AC/DC 24–240 V Rated current ca. 22 mA @ AC 24 V / ca. 19 mA @ DC 24 V Status indication LED green Insulation voltage input / output 4.0 kV _{eff} Housing material PA 6.6 (UL 94 V-0, NFF 12, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position	Load deviation		at U-outp	ut ma	x. 5 mV @ 2 kΩ		
Residual ripple	Output voltage						
Parameterisation DIP switch S1 Protection device short circuit protection Operating data Accuracy 0.5 % + 2 K FSR @ 23 °C Linearity error 0.1 % FSR, temperature linear Build-up time (Accuracy 1%) ca. 60 ms @ 23 °C Critical frequency 10 Hz @ 3 dB / 23 °C Temperature coefficient 150 ppm / K FSR Transmission frequency − General AC 19,2–264 V / DC 18,0–264 V Operation voltage range AC 19,2–264 V / DC 18,0–264 V Rated voltage AC/DC 24–240 V Rated voltage AC/DC 24–240 V Rated current ca. 22 mA @ AC 24 V / ca. 19 mA @ DC 24 V Status indication LED green Insulation voltage input / output 4.0 kV eff Housing material PA 6.6 (UL 94 V-0, NFF 12, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position any Connection device Screwed terminal single wire 0.25 mm²-1.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20–14 fine strand	Output current		max	c. 5 m	A @ 10 V		
Protection device short circuit protection Operating data Couracy 0.5 % + 2 K FSR @ 23 °C Linearity error 0.1 % FSR, temperature linear Build-up time (Accuracy 1%) ca. 60 ms @ 23 °C Critical frequency 10 Hz @ 3 dB / 23 °C Temperature coefficient 150 ppm / K FSR Transmission frequency − General AC 19,2–264 V / DC 18,0–264 V Question voltage range AC 19,2–264 V / DC 18,0–264 V Rated voltage AC/DC 24–240 V Rated current ca. 22 mA @ AC 24 V / ca. 19 mA @ DC 24 V Status indication LED green Insulation voltage input / output 4.0 kV _{eff} Housing material PA 6.6 (UL 94 V-0, NFF I2, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position any Connection device Screwed terminal single wire 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 2	Residual ripple			<20 m	nVeff _{eff}		
Operating data Accuracy 0.5 % + 2K FSR @ 23 °C	Parameterisation		С	IP sv	vitch S1		
Accuracy	Protection device		short	circu	it protection		
Linearity error 0.1 % FSR, temperature linear Build-up time (Accuracy 1%) ca. 60 ms @ 23 °C Critical frequency 10 Hz @ 3 dB / 23 °C Temperature coefficient 150 ppm / k FSR Transmission frequency − General Operation voltage range AC 19,2–264 V / DC 18,0–264 V Rated voltage AC/DC 24–240 V Rated current ca. 22 mA @ AC 24 V / ca. 19 mA @ DC 24 V Status indication LED green Insulation voltage input / output 4.0 kV _{eff} Housing material PA 6.6 (UL 94 V-0, NFF I2, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position any Connection device Screwed terminal single wire 0.25 mm² – 2.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20–16 Operation temperature range -25 °C +60 °C Storage temperature range -40 °C +85 °C Dimensions (w × h × d) 17.5 × 93.0 × 73.0 mm	Operating data						
Build-up time (Accuracy 1%) ca. 60 ms @ 23 °C Critical frequency 10 Hz @ 3 dB / 23 °C Temperature coefficient 150 ppm / K FSR Transmission frequency − General − Operation voltage range AC 19,2–264 V / DC 18,0–264 V Rated voltage AC/DC 24–240 V Rated current ca. 22 mA @ AC 24 V / ca. 19 mA @ DC 24 V Status indication LED green Insulation voltage input / output 4.0 kVerent Housing material PA 6.6 (UL 94 V-0, NFF 12, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position any Connection device Screwed terminal single wire 0.25 mm²-2.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-16 Operation temperature range -25 °C +60 °C Storage temperature range -40 °C +85 °C Dimensions (w × h × d) 17.5 × 93.0 × 73.0 mm Weight 0.059 kg/piece	Accuracy		0.5 % -	+ 2K I	FSR @ 23 °C		
Critical frequency 10 Hz @ 3 dB / 23 °C Temperature coefficient 150 ppm / K FSR Transmission frequency — General — Operation voltage range AC 19,2–264 V / DC 18,0–264 V Rated voltage AC/DC 24–240 V Rated current ca. 22 mA @ AC 24 V / ca. 19 mA @ DC 24 V Status indication LED green Insulation voltage input / output 4.0 kV _{eff} Housing material PA 6.6 (UL 94 V-0, NFF 12, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position any Connection device Screwed terminal single wire 0.25 mm²-2.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-2.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20–16 Operation temperature range -25 °C +60 °C Storage temperature range -40 °C +85 °C Dimensions (w × h × d) 17.5 × 93.0 × 73.0 mm Weight 0.059 kg/piece Approvals	Linearity error		0.1 % FS	R, tei	mperature linear		
Temperature coefficient Transmission frequency General Operation voltage range AC 19,2–264 V / DC 18,0–264 V Rated voltage Rated current Ca. 22 mA @ AC 24 V / ca. 19 mA @ DC 24 V Status indication LED green Insulation voltage input / output Housing material PA 6.6 (UL 94 V-0, NFF 12, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position Connection device Screwed terminal single wire 0.25 mm² – 2.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm² – 1.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm² – 1.5 mm² / AWG 20–16 Operation temperature range Operation temperature range 40 °C +85 °C Dimensions (w × h × d) 17.5 × 93.0 × 73.0 mm Weight ODUS 18,0–264 V AC 19,2–264 V / DC 18,0–264 V AC 19,2–264 V AC 19 mA @ DC 24 V AC 19 mA @ DC 24 V AC 19,2–264 V AC 19,2–26 V AWG 20–16 AW	Build-up time (Accuracy 1%)		ca.	60 m	s @ 23 °C		
Transmission frequency − General Operation voltage range AC 19,2–264 V / DC 18,0–264 V Rated voltage AC/DC 24–240 V Rated current ca. 22 mA @ AC 24 V / ca. 19 mA @ DC 24 V Status indication LED green Insulation voltage input / output 4.0 kV eff Housing material PA 6.6 (UL 94 V-0, NFF I2, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position Screwed terminal single wire 0.25 mm² – 1.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-2.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20–15 mm²-1.5 mm² / AWG 20–16 ferrule 0.25 mm	Critical frequency		10 H	z @ 3	3 dB / 23 °C		
GeneralOperation voltage rangeAC 19,2–264 V / DC 18,0–264 VRated voltageAC/DC 24–240 VRated currentCa. 22 mA @ AC 24 V / ca. 19 mA @ DC 24 VStatus indicationLED greenInsulation voltage input / output4.0 kV effHousing materialPA 6.6 (UL 94 V-0, NFF 12, F2)Color of the housingRAL 7012 basalt greyMountingDIN rail mountable TS35 (EN 60715)Protection classIP20Installation positionanyConnection deviceScrewed terminal single wire 0.25 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm² – 1.5 mm² / AWG 20–14 fine stranded wire with ferrule 0.25 mm² – 1.5 mm² / AWG 20–16Operation temperature range-25 °C +60 °CStorage temperature range-40 °C +85 °CDimensions (w × h × d)17.5 × 93.0 × 73.0 mmWeight0.059 kg/pieceApprovalsCULus in preparation, DNV GL in preparation	Temperature coefficient		150	o ppm	n / K FSR		
Operation voltage range Rated voltage Rated current Ca. 22 mA @ AC 24 V / ca. 19 mA @ DC 24 V Status indication LED green Insulation voltage input / output Housing material Color of the housing Mounting PA 6.6 (UL 94 V-0, NFF 12, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position Connection device Screwed terminal single wire 0.25 push-In single wire 0.25 mm²-2.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-16 Operation temperature range Operation temperature range -25 °C +60 °C Storage temperature range -40 °C +85 °C Dimensions (w × h × d) 17.5 × 93.0 × 73.0 mm Weight O.059 kg/piece Approvals	Transmission frequency				_		
Rated voltage Rated current Ca. 22 mA @ AC 24 V / ca. 19 mA @ DC 24 V Status indication ILED green Insulation voltage input / output Housing material PA 6.6 (UL 94 V-0, NFF I2, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position Connection device Screwed terminal single wire 0.25 push-In single wire 0.25 mm²-2.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-16 Operation temperature range -25 °C +60 °C Storage temperature range -40 °C +85 °C Dimensions (w × h × d) 17.5 × 93.0 × 73.0 mm Weight 0.059 kg/piece Approvals	General						
Rated current Ca. 22 mA @ AC 24 V / ca. 19 mA @ DC 24 V Status indication LED green Insulation voltage input / output Housing material Color of the housing Mounting PA 6.6 (UL 94 V-0, NFF I2, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position Connection device Screwed terminal single wire 0.25 Push-In single wire 0.25 mm²-2.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-16 Operation temperature range Connection temperature range 100 connection temperature range 1	Operation voltage range		AC 19,2-2	64 V	/ DC 18,0-264 V		
Status indication ILED green Insulation voltage input / output Housing material PA 6.6 (UL 94 V-0, NFF I2, F2) Color of the housing RAL 7012 basalt grey Mounting DIN rail mountable TS35 (EN 60715) Protection class IP20 Installation position Connection device Screwed terminal single wire 0.25 Push-In single wire 0.25 mm²-2.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-14 fine stranded wire with ferrule 0.25 mm²-1.5 mm² / AWG 20-15 mm²-1.5 mm² / AWG 20-16 Operation temperature range Operation temperature range -40 °C +85 °C Dimensions (w × h × d) 17.5 × 93.0 × 73.0 mm Weight O.059 kg/piece Approvals	Rated voltage		AC	/DC 2	24–240 V		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Rated current	Cá	a. 22 mA @ AC	24 V	/ ca. 19 mA @ DC 24 V		
$\begin{array}{c} \text{Housing material} & \text{PA 6.6 (UL 94 V-0, NFF 12, F2)} \\ \text{Color of the housing} & \text{RAL 7012 basalt grey} \\ \text{Mounting} & \text{DIN rail mountable TS35 (EN 60715)} \\ \text{Protection class} & \text{IP20} \\ \text{Installation position} & \text{any} \\ \text{Connection device} & \text{Screwed terminal single wire 0.25} & \text{Push-In single wire 0.25 mm}^2 - 2.5 \text{mm}^2 / \text{AWG 20-14 fine stranded wire with ferrule 0.25 mm}^2 - 1.5 \text{mm}^2 / \text{AWG 20-14 fine stranded wire with ferrule 0.25 mm}^2 - 1.5 \text{mm}^2 / \text{AWG 20-16}} \\ \text{Operation temperature range} & -25 ^{\circ}\text{C} \dots +60 ^{\circ}\text{C} \\ \text{Storage temperature range} & -40 ^{\circ}\text{C} \dots +85 ^{\circ}\text{C} \\ \text{Dimensions (w} \times \text{h} \times \text{d)} & 17.5 \times 93.0 \times 73.0 \text{mm} \\ \text{Weight} & 0.059 \text{kg/piece} \\ \text{Approvals} & \text{CULus in preparation, DNV GL in preparation} \\ \end{array}$	Status indication			LED	green		
$ \begin{array}{c} \text{Color of the housing} & \text{RAL 7012 basalt grey} \\ \text{Mounting} & \text{DIN rail mountable TS35 (EN 60715)} \\ \text{Protection class} & \text{IP20} \\ \text{Installation position} & \text{any} \\ \text{Connection device} & \text{Screwed terminal single wire 0.25} \\ \text{mm}^2 - 2.5 \text{ mm}^2 / \text{AWG 20-14 fine stranded wire with ferrule 0.25 mm}^2 - 1.5 \text{ mm}^2 / \text{AWG 20-15} \\ \text{MWG 20-16} & \text{16} \\ \text{Operation temperature range} & -25 ^{\circ}\text{C} \dots +60 ^{\circ}\text{C} \\ \text{Storage temperature range} & -40 ^{\circ}\text{C} \dots +85 ^{\circ}\text{C} \\ \text{Dimensions (w x h x d)} & 17.5 \times 93.0 \times 73.0 \text{ mm} \\ \text{Weight} & 0.059 \text{ kg/piece} \\ \text{Approvals} & \text{cULus in preparation, DNV GL in preparation} \\ \end{array} $	Insulation voltage input / output			4.0	kV _{eff}		
$\begin{array}{c c} \mbox{Mounting} & \mbox{DIN rail mountable TS35 (EN 60715)} \\ \mbox{Protection class} & \mbox{IP20} \\ \mbox{Installation position} & \mbox{any} \\ \mbox{Connection device} & \mbox{Screwed terminal single wire 0.25} & \mbox{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 - 14 fine stranded wire with ferrule 0.25 mm}^2 - 1.5 mm}^2 / AWG 20 - 16 \\ \mbox{Operation temperature range} & -25 °C +60 °C \\ \mbox{Storage temperature range} & -40 °C +85 °C \\ \mbox{Dimensions } (w \times h \times d) & 17.5 \times 93.0 \times 73.0 \ mm \\ \mbox{Weight} & 0.059 \ kg/piece \\ \mbox{Approvals} & \mbox{CULus in preparation, DNV GL in preparation} \\ $			PA 6.6 (U	L 94 '	V-0, NFF I2, F2)		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Color of the housing		RAL	7012	basalt grey		
Installation position Connection device Screwed terminal single wire 0.25 $$ $$ $$ $$ $$ $$ $$ $$ $$ $$	Mounting		DIN rail mou	ntable	e TS35 (EN 60715)		
Connection device $ \begin{array}{c} Screwed \ terminal \ 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 \ 20-14 \ fine \ stranded \ wire \ with \ ferrule \ 0.25 \ mm^2-1.5 \ mm^2 \ / \ AWG \ 20-14 \ fine \ stranded \ wire \ with \ ferrule \ 0.25 \ mm^2-1.5 \ mm^2 \ / \ AWG \ 20-16 \ for \ value \ 0.25 \ value \ valu$	Protection class			IP	220		
$\begin{array}{c} mm^2-2.5 \text{ mm}^2 / \text{AWG 20}-14 \text{ fine stranded wire with ferrule } 0.25 \text{ mm}^2-1.5 \text{ mm}^2 \\ \text{AWG 20}-16 & 16 \\ \end{array}$ Operation temperature range $\begin{array}{c} -25 \text{ °C} \dots +60 \text{ °C} \\ \text{Storage temperature range} \\ \text{Dimensions } (\text{w} \times \text{h} \times \text{d}) \\ \text{Weight} \\ \text{Approvals} \\ \end{array}$ $\begin{array}{c} -25 \text{ °C} \dots +60 \text{ °C} \\ \text{Storage temperature range} \\ \text{O.059 kg/piece} \\ \text{CULus in preparation, DNV GL in preparation} \\ \end{array}$	Installation position			а	,		
Storage temperature range $-40 ^{\circ}\text{C} \dots +85 ^{\circ}\text{C}$ Dimensions (w × h × d) $17.5 \times 93.0 \times 73.0 \text{mm}$ Weight 0.059kg/piece Approvals $\text{cULus in preparation}$	Connection device	mm ² –2.5 mm ² / AV ded wire with ferrule	VG 20–14 fine s e 0.25 mm ² –1.5	tran-	AWG 20–14 fine stranded wire with ferrule 0.25 mm ² –1.5 mm ² / AWG 20		
Storage temperature range $-40 ^{\circ}\text{C} \dots +85 ^{\circ}\text{C}$ Dimensions (w × h × d) $17.5 \times 93.0 \times 73.0 \text{mm}$ Weight 0.059kg/piece Approvals $\text{cULus in preparation}$	Operation temperature range			5°C.			
Dimensions (w × h × d) 17.5 × 93.0 × 73.0 mm Weight 0.059 kg/piece Approvals cULus in preparation, DNV GL in preparation							
Weight 0.059 kg/piece Approvals cULus in preparation, DNV GL in preparation	0 1						
Approvals cULus in preparation, DNV GL in preparation	,						
	Approvals	С			01		
Ctandards EN 00377-0-1	Standards		E	N 60	947-5-1		



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



Dimensions	
1 6 8 12 0V I- 2 6 6 11 I+ 3 6 6 10	~
	0
0+ 4 3 0 9	
0-5 8 8 7 Ub	588

PIN assignm	ent		
I+ TC	Ub	Tovi	— O+ Output — O- Power

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

S1	In			
Switch On	1	2	3	4
TC J (Fe-CuNi)				
TC K (Ni-CrNi)	•			
J: -50 – 150°C				
K: -210 – 105°C				
<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	PU					
Screw terminal										
Rated voltage	AC/DC 24-240 V	750848.0000	R*	LCIS-WP-WTCA-0848-175-S	1					
Push-In										
Rated voltage	AC/DC 24-240 V	751848.0000	S*	LCIS-WP-WTCA-1848-175-PI	1					
Input	75084	48.0000		751848.0000						
Input variable	Th	ermo voltage, e	lemer	nt J or K (DIN/IEC 584-1)						
Galvanic isolation I/O		3-	way i	solation						
Measuring procedure		Volta	ge me	easurement						
Zero /Span		Produ	ction	comparison						
Input resistance		>1 ΜΩ								
Parameterisation		С	IP sv	vitch S1						
Temperature range	J: -50 °C-150 °C / -			C-350 °C / 0 °C-400 °C / 0 °C-600 °C / 0						
		°C-800 °C / 0 °	C-10	00 °C / 0 °C–1200 °C						
				$^{\circ}\text{C}-350~^{\circ}\text{C}$ / 0 $^{\circ}\text{C}-400~^{\circ}\text{C}$ / 0 $^{\circ}\text{C}-600~^{\circ}\text{C}$						
	1	0 °C-800 °C / 0	°C-1	1000 °C / 0 °C-1200 °C						
Cold junction compensation		throughout the	entir	e temperature range						
Protection device		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	c. 5 m	A @ 10 V						
Residual ripple			<20 m	nVeff _{eff}						
Parameterisation		С	IP sv	vitch S1						
Protection device		short	circu	it protection						
Operating data				·						
Accuracy		0.5 % -	- 2K F	FSR @ 23 °C						
Linearity error		0.1 % FS	R. tei	mperature linear						
Build-up time (Accuracy 1%)				s @ 23 °C						
Critical frequency				3 dB / 23 °C						
Temperature coefficient				n / K FSR						
Transmission frequency			- -	_						
General										
Operation voltage range		AC 19 2-2	64 V	/ DC 18,0–264 V						
Rated voltage				24–240 V						
Rated current	C			/ ca. 19 mA @ DC 24 V						
Status indication				green						
Insulation voltage input / output				kV _{eff}						
Housing material		PA 6 6 (III		V-0, NFF I2, F2)						
Color of the housing				basalt grey						
Mounting				e TS35 (EN 60715)						
Protection class		Dir Tali Iliou		220						
Installation position				ny						
Connection device	Screwed termina	al single wire 0 '		Push-In single wire 0.25 mm ² –2.5 mm ² /						
Connection device	mm ² –2.5 mm ² / AV ded wire with ferrule	NG 20–14 fine s	tran-	AWG 20–14 fine stranded wire with ferrule 0.25 mm ² –1.5 mm ² / AWG 20– 16						
Operation temperature range			°C.	+60 °C						
Storage temperature range				+85 °C						
Dimensions (w × h × d)) × 73.0 mm						
Weight				g/piece						
Approvals				DNV GL in preparation						
Standards				947-5-1						



A Available with a lead time R Available on request

Notes



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 1ms response time for AC signal transmission

High load impedance

All current outputs are qualified for 750 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



w intelligent the LCON series





Interface Technology · Microcompact analog/analog converter

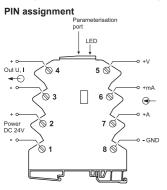
Input: ±30 V, ±50 mA, ±DC 5 A adjustable

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



Dimensions	
5 6 7 8	109.5
_	115,5



-1 Pwr / 8	-U/I
+20 PWF // 07	+I (A) +I (mA) —
	+I (mA)
+40 // 05	+U

Data storage

Mounting

Weight

Approvals Standards

Housing material Color of the housing

Protection class

Installation position

Dimensions ($w \times h \times d$)

Insulation voltage input / output

Operation temperature range Storage temperature range

Range adjustment

	S1		•	-		Switc						
Range*	1	2	3	4	5	Rang	ge*	1	2	3	4	5
0-50mV	•	Γ		Г		0-1	0mA	Γ			Г	•
0 – 100mV		•				0-2	0mA	•				•
0-200mV	•	•				0-5	0mA		•			•
0-500mV			•			4-2	0mA	•	•			•
0 – 1V	•		•			0-0	.5A			•		•
0-2V		•	•			0 – 1.	A	•		•		•
0-5V	•	•	•			0-2	A		•	•		•
0 – 10V				•		0-5	A	•	•	•		•
0-20V	•			•		±1V				L	•	•
0-30V		•		•		±5V		•			•	•
1-5V	•	•		•		±10\	/		•	L	•	•
2-10V			•	•		±5m.	A	•	•		•	•
0 – 1mA	•		•	•		±20r	nΑ			•	•	•
0-2mA		•	•	•		±2A		•		•	•	•
0 – 5mA	•	•	•	•		±5A			•	•	•	•
61 1 - 8 off: FD	T/[TC	M				Outp	ut		6	7	8
See instruction	on	le:	afl	et			0-20)m	A	•		Γ
							4-20			Ĺ	•	T
							0 – 10			•		Т
							±10V			Ė	Ė	•
							2 10			-	Н	-

Description		Part-No.		Туре	PU
Screw terminal					
Rated voltage	DC 24 V	750320	R*	LCON AA DFDT 806210	1
Spring terminal					
Rated voltage	DC 24 V	751320	S*	LCON AA DFDT 806211	1
Input					
Measurement input	+30/-30 V, +50/-5			adjustable via switch and software FDT/ on via micro USB	
Galvanic isolation I/O			3-way	isolation	
Step response (10–90%)	1.5 ms – 750 ms (a	adjustable		of filter stage 1–5, default: filter stage 4 = 0 ms)	
Critical frequency				_	
Input resistance	>800 kΩ @ ·	+30/-30 V,	30 Ω @ +	50/-50 mA, 10 mΩ @ DC +5 A/-5 A	
Zero /Span			freely a	djustable	
Output					
Output signal	0–10 V, -10–10 V			adjustable via switch and software FDT/ ia USB service cable	
Max. load impedance at I-output		700	Ω@0-2	0 mA, 4–20 mA	
Min. load impedance at U-output		2	kΩ @ 0–10) V, -10-+10 V	
Load deviation				_	
Limitation for exceeding measurement range	10.25 V (@ 0–10 V,	-10–10 V,	20.5 mA @ 0–20 mA, 4–20 mA	
max. modulation range/output current	10.5 V	@ 0–10 V,	-10–10 V,	21 mA @ 0–20 mA, 4–20 mA	
Operating data					
Accuracy				0/-30 V, +50/-50 V @ +5 A/-5 A	
Linearity error				30/-30 V, +50/-50 V R @ +5 A/-5 A	
General				- G	
Rated voltage			DC	24 V	
Operation voltage range			16.8	⊢30 V	
Rated current			approx	c. 18 mA	
Status indication			LED greer	n, red (error)	
Input/output protection				short circuit-proof output	
Connection device	Screw terminal 0.	.14 mm ² –	1.5 mm ²	Spring terminal 0.14 mm ² – 1.5 mm ²	
Resolution			16	6-bit	
Temperaturcompensation intern				-	
Configuration		Swite	ch and soft	ware: FDT / DTM	
Temperature error			<100 p	pm FSR	

Flash

2.5 kV_{eff} PA 6.6 (UL 94 V-0)

light grey

DIN rail mountable TS35 (EN 60715)

IP20

any -40 °C ... +70 °C

-40 °C ... +85 °C

6.2 × 90.0 × 115.5 mm 0.050 kg/piece

cULus (E135145), Cl.1 Div2, Gr. A, B, C, D, T4A, GL

EN 60947-5-1

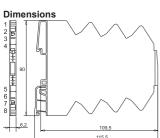


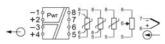
A Available with a lead time

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 V Insulation: 2.5 kV, 3-way isolation







Range adjustment

Range* S1						S2								
	Start	7	8	1	2	End	3	4	5	6	7	8		
П	-200°C	•		Г	Г	0°C	•	Г				П		
	-150°C	•	•	Г		50°C		•	•			П		
	-100°C	•		•		100°C	•	•		•				
	-50°C		•		•	150°C	•		•	•				
	0°C	•	•	•	•	200°C	•	•	•	•				
	Sensor* S	٠,	4	2	12	250°C	•				•			
	Sensor)	Ц	_	3	300°C	•	•			•			
	Pt100		•			350°C	•		•		•			
	Pt1000			•		400°C	•	•	•		•			
	TE J		•	•		450°C	•			•	•			
	TE K				•	500°C	•	•		•	•			
	Pot. %		•	•	•	550°C	•	L	•	•	•			
П	Output* S	1	1	5	6	600°C	•	•	•	•	•	Ш		
)	4	J	U	650°C	•					•		
	0-20mA		•	L		700°C	•	•				•		
	4 – 20mA		L	•		750°C	•	L	•			•		
	0 – 10V		•	•		800°C	_	•	•			•		
	±10V		L		•	850°C	•	L	Ш	•		•		
0	1-S2 1-8 of	F.				900°C	_	•		•		•		
	DT/DTM					950°C	•		•	•		•		
	DIADIN					1000°C	•		•	•		•		
	See instruct	ioi	า			1050°C	•		Ш		•	•		
le	aflet					1100°C	_	•	-		•	P		
						1150°C	•	L	•		•	•		
						1200°C	•	•	•		•	•		
						1250°C	•	L	Ш	•	•	•		
						1300°C	•	•	Ш	•	•	•		
						1350°C	•	L	•	_	•	_		
						1400°C	•	_	•	_	_	•		
						• → 5	SW	itc	h	10	1			

Description		Part-No.		Туре	PU				
Screw terminal									
Rated voltage	DC 24 V	750340	R*	LCON TA DFDT 806210	1				
Spring terminal									
Rated voltage	DC 24 V	751340	S*	LCON TA DFDT 806211	1				
Input									
Measurement input		PT100, P	T1000, pot	tentiometer 0–100 kΩ,					
				e B, C, E, J, K, N, R, S, T upport points, polynomial					
Galvanic isolation I/O		'		isolation					
Temperature range			sistance: -	220 850 °C depending on type 2310 °C depending on type					
Step response (10–90%)		E: 10 – 750 ms, PT: 5 – 750 ms (adjustable by means of filter stage 1–5, default:							
Input resistance		Thermocouples: 1 MΩ							
Sensor current	PT. pote	ntiometer.		: 0.2/0.6 mA depending on type					
Circuit				correction, no external bridges necessary					
	1 1 2, 0, 1 Wile, 1	0. 2 11.0 1		detection	,				
Output	0 10 1/ 10 10 1	/ 0 20 5 1	4 20 m A	adjustable via quitab and aeftuses FDT/					
Output signal	0-10 V, -10-10 V			adjustable via switch and software FDT/ ia USB service cable					
Max. load impedance at I-output				0 mA, 4–20 mA					
Max. load impedance at U-output		>2	kΩ @ 0-	10 V, -10–10 V					
Limitation for exceeding measure- ment range	10.25 V	@ 0–10 V,	-10–10 V,	20.5 mA @ 0-20 mA, 4-20 mA					
max. modulation range/output current	10.5 V	@ 0–10 V,	-10–10 V,	21 mA @ 0–20 mA, 4–20 mA					
Residual ripple				_					
Operating data									
Accuracy				set measuring range (K) + 0.2 % FSR easuring range (K) + 0.4 % FSR					
Linearity error		oupg		% FSR					
General									
Rated voltage			DC	24 V					
Operation voltage range			16.8	⊢30 V					
Rated current			approx	c. 18 mA					
Status indication				n, red (error)					
Input/output protection	C	vervoltage	DC 30 V,	short circuit-proof output					
Connection device	Screw terminal 0			Spring terminal 0.14 mm ² – 1.5 mm ²					
Resolution			16	6-bit					
Temperaturcompensation intern		Thermal	elements:	type ±1 K , max. ±2 K					
Configuration		Swite	ch and soft	ware: FDT / DTM					
Temperature error			<100	ppm/K					
Data storage			FI	ash					
Insulation voltage input / output			2.5	kV _{eff}					
Housing material			PA 6.6 (I	UL 94 V-0)					
Color of the housing			ligh	t grey					
Mounting		DIN rai	l mountabl	e TS35 (EN 60715)					
Protection class			IF	P20					
Installation position			а	nny					
Operation temperature range			-40 °C .	+70 °C					
Storage temperature range			-40 °C .	+85 °C					
Dimensions (w × h × d)			6.2 × 90.0	× 115.5 mm					
Weight			0.050	kg/piece					
Approvals	cUL	us (E13514	15), Cl.1 D	iv2, Gr. A, B, C, D, T4A, GL					
Standards			EN 60	947-5-1					

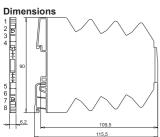


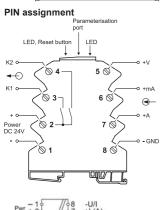
Interface Technology · Microcompact analog/limit value switch

Input: ±30 V, ±50 mA, ±5 A adjustable – adjustable limit value switch

Output: Semiconductor NO contact Insulation: 2.5 kV, 2-way isolation







Description		Part-No.		Туре	PU					
Screw terminal										
Rated voltage	DC 24 V	750360	R*	LCON ALS FDT 806210	1					
Spring terminal										
Rated voltage	DC 24 V	751360	S*	LCON ALS FDT 806211	1					
Input										
Measurement input	+30/-30 V, +50/-5	+30/-30 V, +50/-50 mA, DC +5 A/-5 A, adjustable via software FDT/DTM, connection via micro USB								
Galvanic isolation I/O		2-way 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,	30 Ω @ +	50/-50 mA, 10 mΩ @ DC +5 A/-5 A						
Zero /Span			freely a	ndjustable						
Output										
Output signal	+30/-30 V, +50/-5			djustable via software FDT / DTM, connec 3 service cable	> -					
Contact type		K1,K2:	Semi-con	ductor, N/O contact						
Max. switching voltage			DC	30 V						
Max. switching current			DC 1	100 mA						
Status display output	LED ye	ellow K1 and	LED yello	w K2, not short circuit protected						
Operating mode	Limit value, window, alarm output / additionally adjustable: Hysteresis, input / out- put delay									
Operating data			·	·						
Accuracy	0.1 % FSR @ +30/-30 V, +50/-50 V 0,5 % FSR @ +5 A/-5 A									
Linearity error	±0.05 % FSR @ +30/-30 V, +50/-50 V ±0,1 % FSR @ +5 A/-5 A									
General										
Rated voltage			DC	24 V						
Operation voltage range			16.8	3–30 V						
Rated current			appro	x. 12 mA						
Status indication		LED gre	en, yellow	(K1, K2), red (error)						
Input/output protection				ge DC 30 V						
Connection device	Screw terminal	$0.14 \text{ mm}^2 -$	1.5 mm ²	Spring terminal 0.14 mm ² – 1.5 mm ²						
Resolution			1	6-bit						
Temperaturcompensation intern				_						
Configuration			Software:	FDT / DTM						
Temperature error			<100 p	ppm FSR						
Data storage			F	lash						
Insulation voltage input / output	2.5 kV _{eff}									
Housing material			PA 6.6 (UL 94 V-0)						
Color of the housing	light grey									
Mounting		DIN rai	l mountab	e TS35 (EN 60715)						
Protection class			II	P20						
Installation position				any						
Operation temperature range				+70 °C						
Storage temperature range				+85 °C						
Dimensions (w × h × d)	6.2 × 90.0 × 115.5 mm									
Weight			0.050	kg/piece						
Approvals	cU	Lus (E13514		iv2, Gr. A, B, C, D, T4A, GL						
Standards			EN 60	947-5-1						



A Available with a lead time

Interface Technology · Microcompact temp./limit value switch

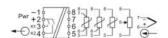
Input: PT, thermocouple, potentiometer – adjustable temperature converter

Output: Semiconductor NO contact Insulation: 2.5 kV, 2-way isolation



Din	ensions	
1 2 3 4 DH-		
5 6 7 8	90	

PIN assignment
Parameterisation
port
LED, Reset button LED
<u> </u>
K2 • • • • • • • • • • • • • • • • • • •
← ⟨ ∅ 4
K1 ∘ RTD
(⊗ 3 ¬ 6 ⊗ > TC △
R Pot.
+ - 1
Power (2 + 7 ()
DC 24V
⟨®1 8 ®\`
ر ۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱۱



Standards

Description		Part-No.		Туре	PU					
Screw terminal										
Rated voltage	DC 24 V	750370	R*	LCON TLS FDT 806210	1					
Spring terminal										
Rated voltage	DC 24 V	751370	S*	LCON TLS FDT 806211	1					
Input										
Measurement input				entiometer 0–100 kΩ,						
				e B, C, E, J, K, N, R, S, T						
Galvanic isolation I/O		Customer-spe		upport points, polynomial						
Temperature range	DT not	2-way isolation								
, ,	Th	PT, potentiometer, resistance: -220 850 °C depending on type Thermal elements: -210 2310 °C depending on type								
Step response (10–90%)	TE: 10 – 750 ms			able by means of filter stage 1–5, de ilter stage 4)	fault:					
Input resistance			Thermoco	uples: 1 MΩ						
Sensor current				: 0.2/0.6 mA depending on type						
Circuit	PT - 2, 3, 4-wir	e, for 2-wire wi		orrection, no external bridges neces	sary,					
			autom.	detection						
Output										
Output signal	adjustable			A, connection via USB service cable						
Contact type		K1,K2: Semi-conductor, N/O contact								
Max. switching voltage				30 V						
Max. switching current	. 50			00 mA						
Status display output		•		w K2, not short circuit protected	, ,					
Operating mode	Limit value, win	dow, alarm out	•	tionally adjustable: Hysteresis, input delay	/ out-					
Operating data										
Accuracy				set measuring range (K) + 0.2 % FS	R					
	Therr	nocoupling: 10		easuring range (K) + 0.4 % FSR						
Linearity error			±0.1	% FSR						
General			50	041/						
Rated voltage				24 V						
Operation voltage range Rated current				–30 V						
		LED ave		(. 12 mA (K1, K2), red (error)						
Status indication Input/output protection				ge DC 30 V						
Connection device	Scrow terming	al 0.14 mm ² –		Spring terminal 0.14 mm ² – 1.5 n	am ²					
Resolution	Screw terrilina	ai 0.14 iiiii —		3-bit - 1.3 m	1111					
Temperaturcompensation intern		Thermal e		type ±1 K , max. ±2 K						
Configuration				FDT / DTM						
Temperature error				ppm/K						
Data storage				ash						
Insulation voltage input / output				.5 kV _{eff}						
Housing material	PA 6.6 (UL 94 V-0)									
Color of the housing	light grey									
Mounting		DIN rail		e TS35 (EN 60715)						
Protection class				220						
Installation position			а	iny						
Operation temperature range			-40 °C .	+70 °C						
Storage temperature range			-40 °C .	+85 °C						
Dimensions (w × h × d)		6	3.2 × 90.0	× 115.5 mm						
Weight			0.050	kg/piece						
Approvals	С	ULus (E13514	5), Cl.1 Di	v2, Gr. A, B, C, D, T4A, GL						



EN 60947-5-1

Interface Technology · Microcompact analog/analog splitter

Input: 0-10 V, 0-20 mA, 4-20 mA adjustable Output: $2 \times 0-10 \text{ V}$, 0-20 mA, 4-20 mA Insulation: 2.5 kV, 4-way isolation

Description



Dimens	sions
1 1 2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	
5 6 7 8	
6,2	109,5
1 1	115,5

PIN assignment	LED
Output 1	5 S Input
+ 5 3	6 6
Power DC 24V	7 S Output 2

_	1 Pur / 8 = (a)
+	$ \begin{array}{c c} 1 & \text{Pwr} & 8 \\ 2 & \text{Pwr} & 7 + \end{array} $ (2)
(1) • -	3 6 -
(1) - +	4 5 +

Range	adi	iustr	nent

	S	1	• -	→	S	witcl	h (Эr	1		
Range	1	2		3	4		5	6		7	8
0-10V	•			•			•				Γ
0-20mA	П	•			•		Г				
4-20mA	•	•		•	•		•	•			
Input Output 1 Output 2											
Filter On •											
Output Lim											

See instruction leaflet for details

Description		Part-No.		туре	PU
Screw terminal					
Rated voltage	DC 24 V	750321	R*	LCON AASP D 806210	1
Spring terminal					
Rated voltage	DC 24 V	751321	S*	LCON AASP D 606211	1
Input					
Measurement input	0–1	10 V. 0–20	mA. 4–20	mA adjustable via switch	
Galvanic isolation I/O		,		isolation	
Critical frequency		30 H		f), 5 Hz (filter on)	
Input resistance	500 kΩ (0–20 mA, 100 mΩ @ 4–20 mA	
Zero /Span		<u> </u>		adjustable	
Output				ajuotuzio	
Output signal		0-	10 \/ 0-20	0 mA, 4–20 mA	
Max. load impedance at I-output			,	0 mA, 4–20 mA	
Max. load impedance at U-output		700		@ 0–10 V	
Limitation for exceeding measure-					
ment range			yes, sı	vitchable	
max. modulation range/output current	10	.5 V @ 0-	10 V, 21 n	nA @ 0–20 mA, 4–20 mA	
Residual ripple			<20 r	nVeff _{eff}	
Operating data					
Accuracy			0.1 9	% FSR	
Linearity error			±0.1	% FSR	
General					
Rated voltage			DC	24 V	
Operation voltage range			16.8	3–30 V	
Rated current			13	3 mA	
Status indication			LED	green	
Input/output protection				short circuit-proof output	
Connection device	Screw terminal 0.	.14 mm ² –	1.5 mm ²	Spring terminal 0.14 mm ² – 1.	.5 mm ²
Resolution			10	6-bit	
Configuration			Sv	vitch	
Temperature error			<150 p	ppm FSR	
Data storage			F	lash	
Insulation voltage input / output			2.5	kV _{eff}	
Housing material				UL 94 V-0)	
Color of the housing			ligh	t grey	
Mounting		DIN rai	l mountabl	e TS35 (EN 60715)	
Protection class			II	P20 .	
Installation position			á	any	
Operation temperature range			-40 °C	+70 °C	
Storage temperature range			-40 °C	+85 °C	
Dimensions (w × h × d)			6.2 × 90.0	× 115.5 mm	
Weight			0.050	kg/piece	
Approvals		cULus, C	I.1 Div2. G	r. A, B, C, D, T4A, GL	

Part-No.

Type

ΡU



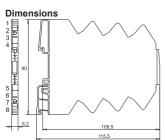
A Available with a lead time

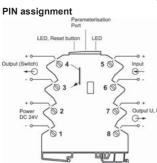
Interface Technology · Microcompact analog/limit value switch

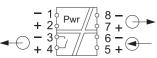
Input/output: 0–10 V, 0–20 mA, 4–20 mA, 2–10 mA, 0–5 V, 1–5 V, 2–10 V adjustable Output: switching transistor DC 30 V/100 mA adjustable (LiveZero)

Insulation: 2.5 kV, 4-way isolation









Range adjustment

D	S1 •	→ Switch	T6	7	8
Range	1123	4 5	101	1	
0 – 10V	•	•			Т
0 – 20mA	•				
4 – 20mA	• •	••			
2 – 10mA	•	Output			
0-5V	• •				
1-5V					
2-10V					
	Input				
Live Zero	Off		$^{+}$		
Live Zero	On		•		
Filter Off				+	
Filter On				•	
Output Lin	nitation	Off			\pm
Output Lin	nitation	On			

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

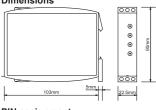
Description		Part-No.		Туре	Р
Screw terminal					
Rated voltage	DC 24 V	750322	Α*	LCON AALS DFDT 806210	1
Spring terminal	DO 041/	754000	0+	LOON AND DEDT 000044	_
Rated voltage	DC 24 V	751322	51	LCON AALS DFDT 806211	1
Input					
Measurement input				A, 4–20 mA, 2–10 mA, adjustable via soft- nection via micro USB	•
Galvanic isolation I/O			4-way	isolation	
Delay ON/OFF		•	•	ns of filter stage 1–5, default: 50 ms)	
Step response (10–90%)				ns of filter stage 1–5, default: 100 ms)	
Input resistance	500 kΩ @ 0–10 V, 0	–5 V, 1–ŧ		V, 100 Ω @ 0–20 mA, 4–20 mA, 2–10 mA	4
Zero /Span			freely a	adjustable	
Output analogue	0 40 1/ 0 5 1/ 4 5 1				
Output signal		are FDT	DTM, con	A, 4–20 mA, 2–10 mA, adjustable via soft- inection via micro USB	-
Max. load impedance at I-output		_		, 4–20 mA, 2–10 mA	
Max. load impedance at U-output		>∠ KΩ @	. U-10 V, (0–5 V, 1–5 V, 2–10 V	
Limitation for exceeding measurement range			yes, sv	witchable	
max. modulation range/output cur- rent	10.5 V @ 0-10 V, 0-	-5 V, 1–5	V, 2–10 \	/, 21 mA @ 0–20 mA, 4–20 mA, 2–10 mA	٨
Residual ripple			<20 r	mVeff _{eff}	
Output switching transistor				CII	
Output signal				A, 4–20 mA, 2–10 mA, adjustable via soft- nection via micro USB	-
Contact type	9	Switching	transistor	non short-circuit proof	
Max. switching voltage		DC 30 V			
Max. switching current			DC 1	100 mA	
Status display output			LED	yellow	
Operating mode	Limit value, timefram	e, tender		ency-, tendency+/-, inversion, error memo ry	-
LiveZero	C	an be ac	tivated via	switch and FDT/DTM	
Operating data					
Accuracy				% FSR	
Linearity error			±0.1	% FSR	
General Pated voltage			D0	24 V	
Rated voltage Operation voltage range				3–30 V	
Rated current				3-30 V 3 mA	
Status indication				reen/red	
Input/output protection			-	ige DC 30 V	
Connection device	Screw terminal 0.1	4 mm ² –		Spring terminal 0.14 mm ² – 1.5 mm ²	
Resolution				6-bit	
Configuration				FDT / DTM	
Temperature error			<150 p	opm FSR	
Data storage				lash	
Insulation voltage input / output				kV _{eff}	
Housing material			PA 6.6 (UL 94 V-0)	
Color of the housing				t grey	
Mounting		DIN rail		e TS35 (EN 60715)	
Protection class			IF	P20	
Installation position				any	
Operation temperature range				+70 °C	
Storage temperature range				+85 °C	
Dimensions (w × h × d)				× 115.0 mm	
Weight		/E4051		kg/piece	
Approvals	cULus	(∟13514	ອ), UI.1 D	iv2, Gr. A, B, C, D, T4A, GL	



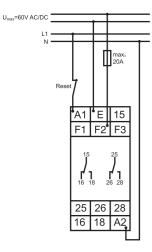
Voltage monitoring 1-phase



	THE PERSON NAMED IN		
Dimensions		000 0	•



PIN assignme	ent					
U _{max} =30V AC/DC		=				_
24VAC/DC =		\vdash	-			_
0V -		Н	-		1	-
	Reset	[7	max. 20A			
		A1 F1	E F2	15 F3		
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	ı	25	26	28		
		16	18	A2,		
				L	╝	



Principle					
1-phase	Description	Part-No).	Туре	PU
Function Monitoring of AC and DC voltages in 1-phase networks with adjustable thresholds separately adjustable start-up suppression and trigger delay function selection to rotary switch Over: High-voltage monitoring of with error memory Under: Under-Voltage monitoring of with error memory Under-Under-Voltage monitoring with error memory Under-Under-Voltage monitoring with error memory With Action and Max With X-function selection with the Voltage monitoring with error memory With X-function given between Min and Max thresholds with error memory Time range Start-up suppression, settable 0-10 s. trigger delay suppression, settable 0-10 s. trigger delay subtable Status indication Status indication Status indication Status indication Status indication Under Voltage status LED green flashing Under Voltager Status LED red flashing Housing Dimensions (w. ** ** ** ** ** ** ** ** ** ** ** ** **	Voltage control				
Monitoring of AC and DC voltages in 1-phase networks with adjustable thresholds separately adjustable start-up suppression and trigger delay function selection via rotary switch. Over: High-voltage monitoring vith error memory Under: Under-voltage monitoring with error memory Under: Under-voltage monitoring with error memory With Individual Mark Problems With Ind		1-phase 750600	S*	LCR-U-1-1-2U-24-240	1
Monitoring of AC and DC voltages in 1-phase networks with adjustable thresholds separately adjustable start-up suppression and trigger delay function selection via rotary switch Over: High-voltage monitoring Over + Latch: High-voltage monitoring with error memory Under: Under-voltage monitoring with error memory Under: Under-voltage monitoring with error memory With: Monitoring the range between thresholds Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring Min + Latch: Monitoring Mi	Function				
with adjustable thresholds separately adjustable start-up suppression and trigger delay function selection via rotary switch Ower: High-voltage monitoring Over + Latch: High-voltage monitoring With error memory Under: Linder-voltage monitoring with error memory With K holinoring the mage between thresholds Min and Max With K holinoring the mage between the sholds Min and Max With K holinoring the mage between the sholds Min and Max With K holinoring the mage between Min and Max thresholds with error memory With K holinoring the mage between Min and Max thresholds with error memory Time range Start-up suppression, settable 0.1–10 s 1.0 s 0.1–10 s 1.0 s		phase networks			
spearailly adjustable start-up suppression and trigger delay function selection via rotary switch Over: High-voltage monitoring Over + Latch: High-voltage monitoring with error memory Under: Under-voltage monitoring with error memory With Monitoring the range between thresholds Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring the range between Min and Max With + Latch: Monitoring Min		onase networks			
Content Con		on and trigger delay			
Over + Latch: High-voltage monitoring with error memory Under: Latch: Under) age monitoring with error memory Under: Latch: Under voltage monitoring with error memory With Monitoring the range between thresholds with and Max With: Monitoring the range between thresholds with and Max With *Latch: Monitoring the range between Min and Max thresholds with error memory Time range Start-up suppression, settable 0 - 10 s Status indication LED green Status indication LED green Status indication LED green flashing Under clay status LED green flashing College clay status LED green flashing Housing LED red flashing Housing LED red flashing Power of thousing Ight grey Housing material PA Protection class IP40 Connection cross-section 1×0.5 to 2.5 mm² with AE 1× mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² with AE 1× mm² without AE and 2×0.5 to 1.5 mm² with AE 2×2.5 mm² with AE 2×2.5 mm² with AE 2×2.5 mm² with AE 2×2.5 mm² without AE and 2×0.5 to 1.5 mm² with AE 2×2.5 mm	function selection via rotary switch	,			
Under - Latch under-voltage monitoring with der or memory With: Monitoring the range between thresholds Min and Max With - Latch: Monitoring the range between thresholds Min and Max With - Latch: Monitoring the range between Min and Max thresholds with error memory Time range Start-up suppression, settable	Over: High-voltage monitoring				
Under + Latch: under-voltage monitoring with error memory With: Monitoring the range between thresholds with and Max With + Latch: Monitoring the range between thresholds with error memory Time range Start-up suppression, settable Under the start suppression suppression suppression Under the start suppression suppression Under the start suppression Under the s		with error memory			
With: Authoritoring the range between thresholds Min and Max With + Latch: Montoring the range between Min and Max thresholds with error memory Time range Start-up suppression, settable 0.1 – 10 s Startus indication Supply status LED green Startus indication Supply status LED green flashing Output relay status LED red Tringger delay status LED red Total flashing Housing Dimensions (w *h *x *d) Color of the housing Housing material PA Protection class Connection cross-section 1×0.5 to 2.5 mm² with AE 1×4 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE any Weight 0.200 kgylece clutus (E135145) Supply circuit Rated voltager ange AC: 15 %+10 %, DC: 20 %+25 % Rated frequency 16 H2 @ AC 24 V , 48 Hz – 400 Hz @ AC 24 V – 240 V Tolerance AC: 15 %+10 %, DC: 20 %+25 % Recovery time Waveform AC Sinus Recovery time Waveform AC Sinus Rescovery time Waveform AC Sinus Weight AC 250 V Switching current max. AC 250 V Switching voltage AC 250 V Measurement surge voltage AC 250 V Switching volt		ng with error memory			
With + Latch: Monitoring the range between Min and Max thresholds with error memory Time range					
Start-up suppression, settable 0.1 - 10 s 1			h error memo	ory	
trigger delay, settable Status indication Supply status Status indige status ULED green Supply status ULED green flashing ULIP yellow ULIP trelay status ULED red flashing Housing ULED red flashing ULED red fla	Time range				
Status indication Start bridge status LED green	Start-up suppression, settable		0 –	10 s	
LED green Startus LED green Startus LED green Start bridge status LED green Startus LED green Startus LED yellow LED red Thigger delay status LED red Startus Startus LED red Startus Startus LED red Startus Startus LED red Startus Startus Startus LED red Startus Startu	trigger delay, settable		0.1 -	- 10 s	
Start bridge status	Status indication				
Output relay status LED yellow Threshold error status LED red Threshold error status LED red flashing Housing 22.5 × 90.0 × 105.0 mm Dimensions (w × h × d) 22.5 × 90.0 × 105.0 mm Color of the housing light grey Housing material PA Protection class 1×0.5 to 2.5 mm² with AE 1×4 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² without AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² without AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² without AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² without AE 2×2.5 mm² without AE				0	
LED red LED	· ·		-	5	
Trigger delay status Housing Housing Housing Housing Dimensions (w × h × d) 22.5 × 90.0 × 105.0 mm Color of the housing Housing material PA PA Protection class IP40 PA Protection class IP40 PA Protection delay PA Protection delay PA Protection delay PA Protection delay PA PA Protection delay PA PA Protection delay PA PA PROTECTION PART PART PART PART PART PART PART PART	' '			*	
Housing Dimensions (w × h × d) 22.5 × 90.0 × 105.0 mm Dight grey					
Dimensions (w × h × d) Color of the housing Housing material Protection class Connection cross-section 1×0.5 to 2.5 mm² with AE 1×4 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² with AE 1×4 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² with AE 1×4 mm² without AE Installation position Weight 0.200 kg/piece Approvals CuLus (E135145) Supply circuit Rated voltage range AC/DC 24 V − 240 V Tolerance AC: -15 %/+10 %, DC: -20 %/+25 % Rated frequency AE 16 Hz @ AC 24 V, 48 Hz − 400 Hz @ AC 24 V − 240 V Power consumption A.5 VA (1 W) Operating time Boson as Bo			LEDIE	ı ilasılırıy	
Section of the housing Section	•		22 5 × 90 0	x 105.0 mm	
Housing material PA Protection class Connection cross-section 1×0.5 to 2.5 mm² with AE 1×4 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² with AE 1×4 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² with AE 1×4 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×2.5 mm² without AE 2×0.5 to 1.5 mm² with AE 2×0.5 to	,				
Protection class IP40	9		0	0 ,	
Installation position	Protection class				
Installation position	Connection cross-section	1×0.5 to 2.5 mm ² with AE 1	×4 mm ² wit	hout AE 2×0.5 to 1.5 mm ² with AE 2×2.	5
Weight 0.200 kg/piece Approvals cULus (E135145) Supply circuit Rated voltage range AC/DC 24 V – 240 V Tolerance AC: -15 %/+10 %, DC: -20 %/+25 % Rated frequency 16 Hz @ AC 24 V, 48 Hz – 400 Hz @ AC 24 V – 240 V Power consumption 4.5 VA (1 W) Operating time 100 % ED Recovery time 500 ms Waveform AC Sinus Residual ripple 10 % Voltage drop >15 % of the power supply Measurement surge voltage 4 kV Output circuit V Wumber of channels 2 Measurement voltage AC 250 V Switching voltage AC 250 V Switching urrent max. 3A (5A at a distance >5mm) Protection device 5 A, quick-acting Mechanical service life 20 × 10 ⁶ (1000 VA) Electrical service life 20 × 10 ⁶ (1000 VA) Switching frequency 60/min @ 100 VA, 6/min @ 100 VA Over voltage category III acc. IEC 6064-1 Measurement surge voltage 4 kV			mm ² wi	thout AE	
Approvals Supply circuit Rated voltage range AC/DC 24 V - 240 V Tolerance AC: -15 %/+10 %, DC: -20 %/+25 % Rated frequency 16 Hz @ AC 24 V , 48 Hz - 400 Hz @ AC 24 V - 240 V Power consumption Operating time 100 % ED Recovery time 100 % ED Resovery time 500 ms Waveform AC Residual ripple 10 % Voltage drop At V Output circuit Number of channels 2 Measurement surge voltage AC 250 V Switching voltage AC 250 V Switching urrent max. 3A (5A at a distance >5mm) Protection device Mechanical service life 20 × 10 ⁶ (1000 VA) Electrical service life 20 × 10 ⁶ (1000 VA) Switching frequency Over voltage category Ill acc. IEC 60664-1 Measurement surge voltage AC category Resouracy Basic accuracy Frequency response -10 %/+5 % (16.6 - 400 Hz) Temperature error \$0.05 %/*C Measuring variable DC, AC (16.6 - 400 Hz) External fuse Measuring range AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 Veff@ 30 V, 150 Veff@ 60 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 Veff@ 30 V, 150 Veff@ 60 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 Veff@ 30 V, 150 Veff@ 60 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 Veff@ 30 V, 150 Veff@ 60 V, AC/DC 6	•			•	
Supply circuit AC/DC 24 V − 240 V Rated voltage range AC: 15 %/+10 %, DC: -20 %/+25 % Rated frequency 16 Hz @ AC 24 V, 48 Hz − 400 Hz @ AC 24 V − 240 V Power consumption 4.5 VA (1 W) Operating time 100 % ED Recovery time 500 ms Waveform AC Sinus Residual ripple 10 % Voltage drop >15 % of the power supply Measurement surge voltage 4 kV Output circuit 2 Measurement voltage AC 250 V Switching voltage AC 250 V Switching current max. 3A (5A at a distance >5mm) Protection device 5 A, quick-acting Mechanical service life 20 × 10 ⁶ (1000 VA) Electrical service life 2 × 10 ⁵ (1000 VA) Switching frequency 60/min @ 100 VA, 6/min @ 1000 VA Over voltage category III acc. IEC 60664-1 Measurement surge voltage 4 kV Accuracy ≤3 % (end of scale) Basic accuracy ≤2 % Voltage influence N/A Temperature error <td></td> <td></td> <td></td> <td>9 .</td> <td></td>				9 .	
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Tolerance AC: -15 %/+10 %, DC: -20 %/+25 % Rated frequency 16 Hz @ AC 24 V, 48 Hz − 400 Hz @ AC 24 V − 240 V Power consumption 4.5 VA (1 W) Operating time 100 % ED Recovery time 500 ms Waveform AC Sinus Residual ripple 10 % Voltage drop >15 % of the power supply Measurement surge voltage 4 kV Output circuit Number of channels 2 Measurement voltage AC 250 V Switching current max. 3A (5A at a distance >5mm) Protection device 5 A, quick-acting Mechanical service life 20 × 10 ⁶ (1000 VA) Electrical service life 2 × 10 ⁵ (1000 VA) Switching frequency 60/min @ 100 VA, 6/min @ 1000 VA Over voltage category III acc. IEC 60664-1 Measurement surge voltage 4 kV Accuracy Basic accuracy ≤3 % (end of scale) Frequency response -10 %/+5 % (16.6 – 400 Hz) Tolerance of setting 5 % (end of scale) Repeat accuracy ≤2 % Voltage influence N/A Measuring variable DC, AC (16.6 – 400 Hz) External fuse max. 20 A (acc. UL 601010) Measuring range AC/DC 30 V, AC/DC 300 V Overload capability 100 V _{4eff} @ 300 V, 150 V _{efff} @ 60 V, 440 V _{efff} @ 300 V			AC/DC 2/	1 V - 240 V	
Rated frequency Power consumption 4.5 VA (1 W) Power consumption 4.5 VA (1 W) Power consumption 8.5 VA (1 W) Power consumption 9.5 VA (1 W) Power consumption 9.5 VA (1 W) Power supply Power supply Power supply Power supply 9.5 VA (2 50 V) Power consumption 9.5 VA (2 60 V) Power consumption 9.5 VA (2 60 V) Power consumption 9.5 VA (2 C C 60 V) Power consumption 9.5 VA (2 C C 60 V) Power consumption 9.5 VA (2 C C 60 V) Power consumption 9.5 VA (2 C C 60 V) Power consumption 9.5 VA (2 C C 60 V) Power consumption 9.5 VA (2 C C 60 V) Power consumption 9.5 VA (2 C C 60 V) Power consumption 9.5 VA (2 C C 60 V) Power consumption 9.5 VA (2 C C 60 V) Power consumption 9.5 VA (2 C C 60 V) Power consumption 9.5 VA (2 C C 60 V) Power consumption 9.5 VA (2 C C C V) Power consumption 9.5 VA (2 C C C V) Power consumption 9.5 VA (2 C C C V) Power consumption 9.5 VA (2 C C V) Po	0 0	AC: -			
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Output circuit Number of channels 2 Measurement voltage AC 250 V Switching voltage AC 250 V Switching voltage AC 250 V Switching current max. 3A (5A at a distance >5mm) Protection device 5 A, quick-acting Mechanical service life 20 × 10 ⁶ (1000 VA) Electrical service life 2 × 10 ⁵ (1000 VA) Switching frequency 60/min @100 VA, 6/min @ 1000 VA Over voltage category Ill acc. IEC 60664-1 Measurement surge voltage 4 kV Accuracy ≤3 % (end of scale) Frequency response -10 %/+5 % (16.6 – 400 Hz) Tolerance of setting ≤5 % (end of scale) Repeat accuracy ≤2 % Voltage influence N/A Temperature error ≤0.05 %/°C Measuring circuit Measuring variable DC, AC (16.6 – 400 Hz) External fuse max. 20 A (acc. UL 601010) Measuring range AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 V _{eff} @ 30 V, 150 V _{eff} @ 60 V, 440 V _{eff} @ 300 V	0 1	>			
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Switching current max. 3A (5A at a distance >5mm) Protection device 5 A, quick-acting Mechanical service life 20 × 10 ⁶ (1000 VA) Electrical service life 2 × 10 ⁵ (1000 VA) Switching frequency 60/min @100 VA, 6/min @ 1000 VA Over voltage category III acc. IEC 60664-1 Measurement surge voltage 4 kV Accuracy ≤3 % (end of scale) Frequency response -10 %/+5 % (16.6 – 400 Hz) Tolerance of setting ≤5 % (end of scale) Repeat accuracy ≤2 % Voltage influence N/A Temperature error ≤0.05 %/°C Measuring circuit DC, AC (16.6 – 400 Hz) Measuring variable DC, AC (16.6 – 400 Hz) External fuse max. 20 A (acc. UL 601010) Measuring range AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 V _{eff} @ 30 V, 150 V _{eff} @ 60 V, 440 V _{eff} @ 300 V	· · · · · · · · · · · · · · · · · · ·				
Protection device 5 A, quick-acting Mechanical service life 20 × 10 ⁶ (1000 VA) Electrical service life 2 × 10 ⁵ (1000 VA) Switching frequency 60/min @100 VA, 6/min @ 1000 VA Over voltage category III acc. IEC 60664-1 Measurement surge voltage 4 kV Accuracy Basic accuracy ≤3 % (end of scale) Frequency response -10 %/+5 % (16.6 − 400 Hz) Tolerance of setting ≤5 % (end of scale) Repeat accuracy ≤2 % Voltage influence N/A Temperature error ≤0.05 %/°C Measuring circuit Measuring variable DC, AC (16.6 − 400 Hz) External fuse max. 20 A (acc. UL 601010) Measuring range AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 V _{eff} @ 30 V, 150 V _{eff} @ 60 V, 440 V _{eff} @ 300 V		3,			
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Measurement surge voltage 4 kV Accuracy ≤3 % (end of scale) Frequency response -10 %/+5 % (16.6 – 400 Hz) Tolerance of setting ≤5 % (end of scale) Repeat accuracy ≤2 % Voltage influence N/A Temperature error ≤0.05 %/°C Measuring circuit DC, AC (16.6 – 400 Hz) Measuring variable DC, AC (16.6 – 400 Hz) External fuse max. 20 A (acc. UL 601010) Measuring range AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 V _{eff} @ 30 V, 150 V _{eff} @ 60 V, 440 V _{eff} @ 300 V	Switching frequency	60/mi	n @100 VA	, 6/min @ 1000 VA	
Accuracy ≤3 % (end of scale) Frequency response -10 %/+5 % (16.6 − 400 Hz) Tolerance of setting ≤5 % (end of scale) Repeat accuracy ≤2 % Voltage influence N/A Temperature error ≤0.05 %/°C Measuring circuit DC, AC (16.6 − 400 Hz) Measuring variable DC, AC (16.6 − 400 Hz) External fuse max. 20 A (acc. UL 601010) Measuring range AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 V _{eff} @ 30 V, 150 V _{eff} @ 60 V, 440 V _{eff} @ 300 V	Over voltage category		III acc. IE	C 60664-1	
Basic accuracy ≤3 % (end of scale) Frequency response -10 %/+5 % (16.6 – 400 Hz) Tolerance of setting ≤5 % (end of scale) Repeat accuracy ≤2 % Voltage influence N/A Temperature error ≤0.05 %/°C Measuring circuit DC, AC (16.6 – 400 Hz) Measuring variable DC, AC (16.6 – 400 Hz) External fuse max. 20 A (acc. UL 601010) Measuring range AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 V _{eff} @ 30 V, 150 V _{eff} @ 60 V, 440 V _{eff} @ 300 V	Measurement surge voltage		4	kV	
Frequency response -10 %/+5 % (16.6 − 400 Hz) Tolerance of setting Sepeat accuracy Voltage influence N/A Temperature error Measuring circuit Measuring variable External fuse Masuring range AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability (10 %/+5 % (16.6 − 400 Hz) Separation Separation AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability (10 %/+5 % (16.6 − 400 Hz) Separation AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability	Accuracy				
Tolerance of setting Separation Separa	,		,		
Repeat accuracy ≤2 % Voltage influence N/A Temperature error ≤0.05 %/°C Measuring circuit DC, AC (16.6 – 400 Hz) External fuse max. 20 A (acc. UL 601010) Measuring range AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 V _{eff} @ 30 V, 150 V _{eff} @ 60 V, 440 V _{eff} @ 300 V		-1		,	
Voltage influence N/A Temperature error ≤0.05 %/°C Measuring circuit DC, AC (16.6 – 400 Hz) Measuring variable DC, AC (16.6 – 400 Hz) External fuse max. 20 A (acc. UL 601010) Measuring range AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 V _{eff} @ 30 V, 150 V _{eff} @ 60 V, 440 V _{eff} @ 300 V	ŭ .		,	,	
Measuring circuit DC, AC (16.6 – 400 Hz) Measuring variable DC, AC (16.6 – 400 Hz) External fuse max. 20 A (acc. UL 601010) Measuring range AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 V _{eff} @ 30 V, 150 V _{eff} @ 60 V, 440 V _{eff} @ 300 V	, , , , , , , , , , , , , , , , , , , ,				
Measuring circuit Measuring variable DC, AC (16.6 – 400 Hz) External fuse max. 20 A (acc. UL 601010) Measuring range AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 V _{eff} @ 30 V, 150 V _{eff} @ 60 V, 440 V _{eff} @ 300 V	9				
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External fuse max. 20 A (acc. UL 601010) Measuring range AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 V _{eff} @ 30 V, 150 V _{eff} @ 60 V, 440 V _{eff} @ 300 V	•		DC. AC (16	6.6 – 400 Hz)	
Measuring range AC/DC 30 V, AC/DC 60 V, AC/DC 300 V Overload capability 100 V _{eff} @ 30 V, 150 V _{eff} @ 60 V, 440 V _{eff} @ 300 V	External fuse	m			
Overload capability 100 V _{eff} @ 30 V, 150 V _{eff} @ 60 V, 440 V _{eff} @ 300 V	Measuring range			•	
	Overload capability				
Input resistance 47 kΩ @ 30 V, 100 kΩ @ 60 V, 470 kΩ @ 300 V	Input resistance				



Switching threshold min.

Switching threshold max.

Over voltage category

5 % – 95 % U_N

10 % – 100 % U_N III acc. IEC 60664-1

Available on request

Available with a lead time

Measurement surge voltage	4 kV
Environmental conditions	
Temperature range according to UL	-25 °C +40 °C
Temperature range	-25 °C +55 °C
Storage temperature range	-25 °C +70 °C
Relative air humidity	15 % to 85 % acc. IEC 60721-3-3 Class 3K3
Degree of polution	3
Vibration resistance	10 – 55 Hz 0.35 mm acc. IEC60068-2-6
Impact resistance	15 g 11 ms acc. IEC 60068-2-27
Approvals	cULus (E135145)

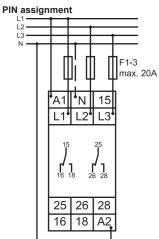


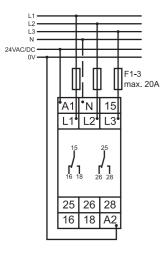
Voltage monitoring 3-phase



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Dimensions ⊕⊕⊕





Description	P	art-No.		Туре	Pι
Voltage control	2 mbana 7	EOCOE	C*	LCR-U-3-1-2U-24-240	1
	3-phase 7	50605	3 "	LCR-U-3-1-2U-24-240	
unction					
Voltage monitoring in 3-phase newith adjustable thresholds	etworks				
Settable trigger delay	and phase failure				
Monitoring the phase sequence and Asymmetry monitoring with setta					
function selection via rotary switch					
Jnder: Under-voltage monitoring					
Under + SEQ: Under-voltage an					
WIN: Monitoring the range betwee WIN + SEQ: Monitoring the range			holds and	nhase sequence monitoring	
Time range		ax tilloo	noido dila	prided dequeries meritaring	
Start-up suppression, settable			١	No	
rigger delay, settable			0.1 -	- 10 s	
Status indication					
Output relay status				yellow	
Threshold error status				O red I flashing	
Trigger delay status Housing			LED led	niasning	
Dimensions (w × h × d)		2	2 5 × 90 0	× 105.0 mm	
Color of the housing				grey	
Housing material			_	PA	
Protection class				240	
Connection cross-section	1×0.5 to 2.5 mm ² witl	h AE 1×	4 mm ² wit	hout AE 2×0.5 to 1.5 mm ² with AE 2×2.5	
4- -4:				thout AE	
nstallation position Weight				ny kg/piece	
Approvals				Lus	
Supply circuit			00	243	
Rated voltage range			AC/DC 24	V − 240 V	
Power consumption			2 VA	(1 W)	
Operating time			100	% ED	
Recovery time) ms	
Waveform AC				nus	
Residual ripple		•) %	
Voltage drop Measurement surge voltage		>3		supply voltage kV	
Output circuit			4	KV	
Number of channels				2	
Switching element			Re	lays	
Contact type				ver contact	
Measurement voltage			AC 2	250 V	
Switching voltage				250 V	
Switching current max.		3A		istance >5mm)	
Protection device				ck-acting (1000 VA)	
Mechanical service life Electrical service life				(1000 VA)	
Switching frequency		60/min	- 1	6/min @ 1000 VA	
Over voltage category		00/111111	_	C 60664-1	
Measurement surge voltage			4	kV	
Accuracy					
Basic accuracy			,	d of scale)	
Tolerance of setting				d of scale)	
Repeat accuracy				2 %	
Femperature error Measuring circuit			≤0.05	5 %/°C	
Measuring circuit Measuring variable			AC Sinus /	48 to 63 Hz)	
External fuse				cc. UL 601010)	
Measuring range		ma		400/230 V	
Overload capability			` '	600/346 V	
nput resistance			` '	ΜΩ	
Switching threshold min.				20 % U _N	
Switching threshold max.				30 % U _N	
Asymmetry				- 25 %	
Over voltage category				C 60664-1	
Measurement surge voltage			4	kV	
nvironmental conditions					



Environmental conditions Temperature range according to UL

-25 °C ... +40 °C

A Available with a lead time

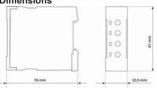
Temperature range	-25 °C +55 °C	
Storage temperature range	-25 °C +70 °C	
Relative air humidity	15 % to 85 % acc. IEC 60721-3-3 Class 3K3	
Degree of polution	3	
Vibration resistance	10 – 55 Hz 0.35 mm acc. IEC60068-2-6	
Impact resistance	15 g 11 ms acc. IEC 60068-2-27	
Approvals	cULus	



Current monitoring 1-phase, AC-DC 10 A

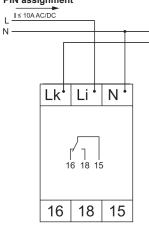


Dimensions



PIN assignment

N·



Approvals

Description		Part-No.	Туре	PU
Current Control				
	1-phase	750630 S *	LCR-I-1-10-1U-24-240	1
Time renge				
Time range Switch-on delay			300 ms	
Switch-off delay		0.1 – 1	10 s, adjustable	
Status indication		0.1	10 3, adjustable	
Supply status		ı	.ED green	
Output relay status			ED yellow	
Status under/over-current			LED red	
Trigger delay status		LEC	red flashing	
Housing				
Dimensions (w × h × d)		22.5 ×	67.0 × 76.0 mm	
Color of the housing			light grey	
Housing material		ſ	PA 6.6 V0	
Protection class			IP20	
Connection device			ewed terminal	
Connection cross-section			20 – AWG 13	
Connection cross-section		0.5 - 2	2.5 mm ² with AE	
Installation position			any	
Weight		0.0	070 kg/piece	
Approvals			cULus	
Supply circuit		AC 110 V/DC	C 24 V – AC/DC 240 V	
Rated voltage range Tolerance			5 %, DC: -30 %/+30 %	
Rated frequency			.6 – 400 Hz	
Power consumption	0.25		24 V, 0.37 W/1.3 VA @ 230 V	
Operating time	0.23		100 % ED	
Bridging time			<140 ms	
Recovery time			>200 ms	
Voltage drop			≥6 V	
Output circuit				
Number of channels			1	
Switching element			Relays	
Contact type		Chang	ge over contact	
Measurement voltage		AC 250	V (IEC 60947-1)	
Switching voltage			AC 400 V	
Switching current max.	AC-1: 8A/250V, A		(B300), DC-12: 8A/24V, DC-13: 0.1/	4/250V
Protection device		8 A,	, quick-acting	
Mechanical service life			10 ⁶ (1000 VA)	
Electrical service life			(1000 VA) (AC-1)	
Switching frequency		6/n	nin with load	
Accuracy		40.5.0	/ /	
Basic accuracy			(end of scale)	
Tolerance of setting Repeat accuracy		25 %	(end of scale) ≤1 %	
Temperature error		<	0.05 %/°C	
Measuring circuit			0.03 /0/ C	
Measuring variable		Cur	rent 1-phase	
Measuring range			C/DC 10 A	
Measuring procedure			effective value	
Monitored functions	Und		r-current, under/over-current	
Overload capability			ad <1 s: 50 A, Impulse load<100 ms:	150 A
Input resistance			2 mΩ	
Switching threshold min.		5	% – 95 %	
Switching threshold max.		10	% – 100 %	
Hysteresis			1 %	
Environmental conditions				
Temperature range			°C +60 °C	
Storage temperature range			°C +70 °C	
Relative air humidity	5		IEC 60721-3-3 Class 3K3	
Vibration resistance			nm 13.2 – 100 Hz 7 m/s ²	
Impact resistance		15 g 11 ms	acc. IEC 60068-2-27	



cULus

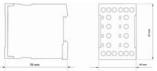
A Available with a lead time

R Available on request

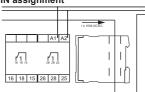
Current monitoring 1-phase, AC-DC 5 A



Dimensions



PIN assignment



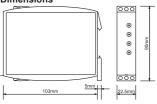
Description		Part-No.	Туре	Pl
Current Control				
	1-phase	750635 S *	LCR-I-100-2U-24-240	1
Fime range		,	300 ms	
Switch-on delay Switch-off delay			ou ms) s, adjustable	
Start-up suppression, settable) – 10 s	
Status indication		(7 - 10 \$	
Supply status		1.0	ED green	
Output relay status			D yellow	
Status under/over-current			.ED red	
Trigger delay status			red flashing	
Housing			red liastiling	
Dimensions (w × h × d)		45.0 × 6	7.0 × 76.0 mm	
Color of the housing			ght grey	
Housing material			4 6.6 V0	
Protection class			IP20	
Connection device		Screv	ved terminal	
Connection cross-section			20 – AWG 13	
Connection cross-section			5 mm ² with AE	
nstallation position			any	
Weight		0.07	0 kg/piece	
Approvals			cULus	
Supply circuit				
Rated voltage range		AC/DC	24 V – 240 V	
Tolerance		AC: -15 %/+10	%, DC: -30 %/+30 %	
Rated frequency		16,6	6 – 400 Hz	
Power consumption		0.40 W/0.25 VA @ 24	V, 0.50 W/0.9 VA @ 230 V	
Operating time		10	00 % ED	
Bridging time		•	<20 ms	
Recovery time		>	500 ms	
Voltage drop			≥6 V	
Output circuit				
Number of channels			2	
Switching element			Relays	
Contact type			e over contact	
Measurement voltage			/ (IEC 60947-1)	
Switching voltage			C 400 V	
Switching current max.	AC-1: 8A/250		B300), DC-12: 8A/24V, DC-13: 0.1A/	250V
Protection device			quick-acting	
Mechanical service life			0 ⁶ (1000 VA)	
Electrical service life		,	000 VA) (AC-1)	
Switching frequency		6/mi	n with load	
Accuracy			0.0% 0.50/00.11	
Basic accuracy		,	0 % @ 50/60 Hz)	
Tolerance of setting		≤5 % (end of scale)	
Repeat accuracy		2 0/ on basis s	≤1 %	
Moisture influence			racy (>85 % air humidity)	
Temperature error		≤0	.04 %/°C	
Measuring circuit Measuring variable		Current 1 phos	a current transformer	
Measuring variable Measuring range			e, current transformer DC 100 A	
Measuring range Measuring procedure			ffective value	
Monitored functions			current, under/over-current	
wormored furfolions	ı		separated relay outputs (MM)	
			nonitoring (2Max)	
			can be activated (+L)	
Switching threshold min.		5 9	% – 95 %	
Switching threshold max.		10 9	% – 100 %	
Hysteresis			1 %	
Environmental conditions				
Temperature range		-25 °C	C +60 °C	
Storage temperature range		-40 °(C +70 °C	
Relative air humidity			EC 60721-3-3 Class 3K3	
ri e i i		2 – 13.2 Hz 1 mr	n 13.2 – 100 Hz 7 m/s ²	
/ibration resistance				



Current control in 3-phase networks 1-phase, AC 5 A

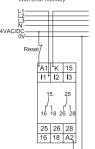


Dimensions

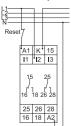


PIN assignment

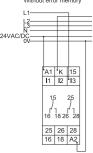
Measuring range: 20mA Voltage supply: 24V With error memory



Measuring range: 1A Voltage supply: 230V With error memory



Measuring range: 5A Voltage supply: 24V Without error memory



Description		Part-No.	Туре	PU
Current Control				
	1-phase	750631 S *	LCR-I-1-5-2U-24-240	1

Current monitoring of AC and DC voltages in 1-phase networks

with adjustable thresholds

separately adjustable start-up suppression and trigger delay

function selection via rotary switch Over: Over-current monitoring

Over + Latch: Over-current monitoring with error memory

Under:Under-current monitoring
Under + Latch: Under-current monitoring with error memory WIN: Monitoring the range between thresholds Min and Max

WIN + Latch: Monitoring the range between Min and Max thresholds with error memory

Time range

Start-up suppression, settable	0 – 10 s
trigger delay, settable	0.1 – 10 s
Status indication	
Supply status	LED green
Start bridge status	LED green flashing
Output relay status	LED yellow
Threshold error status	LED red
Trigger delay status	LED red flashing
Housing	
Dimensions (w × h × d)	22.5 × 90.0 × 105.0 mm
Color of the housing	light grey
Housing material	PA
Protection class	IP40
Connection cross-section	1×0.5 to 2.5 mm 2 with AE 1×4 mm 2 without AE 2×0.5 to 1.5 mm 2 with AE 2×2.5 mm 2 without AE
Installation position	any
Weight	0.200 kg/piece

	mm- without AE
Installation position	any
Weight	0.200 kg/piece
Approvals	cULus

Supply circuit

Rated voltage range AC/DC 24 V - 240 V AC: -15 %/+10 %, DC: -20 %/+25 % 16 Hz – 48 Hz @ AC 48 – 240 V, 48 Hz – 400 Hz @ AC 24 V – 240 V Rated frequency

4.5 VA (1 W) Power consumption Operating time 100 % ED Recovery time 500 ms Waveform AC Sinus Residual ripple 10 %

Voltage drop >15 % of the power supply

4 kV

Measurement surge voltage

Output circuit Number of channels

Relays Switching element Change over contact Contact type Measurement voltage AC 250 V

Switching voltage AC 250 V Switching current max 5A (3A) Protection device 5 A, quick-acting

Mechanical service life 20 × 10⁶ (1000 VA) 2 × 10⁵ (1000 VA) Electrical service life

60/min @100 VA, 6/min @ 1000 VA Switching frequency III acc. IEC 60664-1 Over voltage category

4 kV

Measurement surge voltage Accuracy ≤3 % (end of scale) Basic accuracy Frequency response -10 %/+5 % (16.6 - 400 Hz) ≤5 % (end of scale) Tolerance of setting Repeat accuracy ≤2 % Voltage influence N/A Temperature error ≤0.05 %/°C Measuring circuit Measuring variable DC, AC (16.6 - 400 Hz)

Measuring range AC/DC 20 mA, AC/DC 1 A, AC/DC 5 A 250 mA @ 20 mA, 3 A @ 1 A, 10 A @ 5A Overload capability Input resistance $2.7~\Omega$ @ 20~mA, $47~m\Omega$ @ 1~A, $10~m\Omega$ @ 5~ASwitching threshold min. 5 % - 95 % I_N

Switching threshold max. 10 % - 100 % I_N

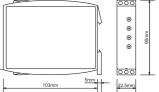
Over voltage category	III acc. IEC 60664-1
Measurement surge voltage	4 kV
Environmental conditions	
Temperature range according to UL	-25 °C +40 °C
Temperature range	-25 °C +55 °C
Storage temperature range	-25 °C +70 °C
Relative air humidity	15 % to 85 % acc. IEC 60721-3-3 Class 3K3
Degree of polution	3 acc. IEC 60664-1
Vibration resistance	10 – 55 Hz 0.35 mm acc. IEC60068-2-6
Impact resistance	15 g 11 ms acc. IEC 60068-2-27
Approvals	cULus



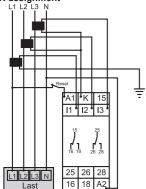
Current control in 3-phase networks 3-phase, AC/DC 5 A

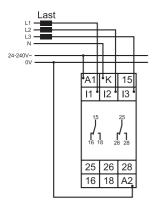


Dimensions



PIN assignment





Description		Part-No.	Туре	PU
Current Control				
	3-phase	750640 S *	LCR-I-3-05-2U-24-240	1

3-phase current monitoring

separately adjustable start-up suppression and trigger delay

function selection via rotary switch

Over: Over-current monitoring
Over + Latch: Over-current monitoring with error memory
Under:Under-current monitoring

Under + Latch: Under-current monitoring with error memory
WIN: Monitoring the range between thresholds Min and Max
WIN + Latch: Monitoring the range between Min and Max thresholds with error memory

Time range

Otal t-up supplession, settable	0 - 10 3
trigger delay, settable	0.1 – 10 s
Status indication	
Supply status	LED green
Start bridge status	LED green flashing
Output relay status	LED yellow
Threshold error status	LED red
Trigger delay status	LED red flashing
Housing	

Housing	
Dimensions (w × h × d)	22.5 × 90.0 × 105.0 mm
Color of the housing	light grey
Housing material	PA 6.6 V0
Protection class	IP20
Connection cross-section	1×0.5 to 2.5 mm ² with AE 1×4 mm ² without AE 2×0.5 to 1.5 mm ² with AE 2×2.5

mm² without AE Installation position any Weight 0.200 kg/piece Approvals cULus

Supply circuit	
Rated voltage range	AC/DC 24 V – 240 V
Tolerance	AC: -15 %/+10 %, DC: -20 %/+25 %
Rated frequency	16 Hz @ AC 24 V, 48 Hz – 400 Hz @ AC 24 V – 240 V
Power consumption	2 VA (1.5 W)

Operating time 100 % ED Recovery time 100 ms >30 % of the supply voltage Voltage drop

III acc. IEC 60664-1 Over voltage category Measurement surge voltage 4 kV

Output circuit Number of channels

Switching element	Relays
Contact type	Change over contact
Measurement voltage	AC 250 V (IEC 60947-1)
Switching voltage	AC 250 V
Switching current max.	3A (5A at a distance >5mm)
Protection device	5 A, quick-acting

20 × 10⁶ (1000 VA) 2 × 10⁵ (1000 VA) Mechanical service life Electrical service life Switching frequency 60/min @100 VA, 6/min @ 1000 VA

Over voltage category III acc. IEC 60664-1 Measurement surge voltage 4 kV

Accuracy

Basic accuracy	≤3 % (end of scale)
Frequency response	-10 %/+5 % (16.6 – 400 Hz)
Tolerance of setting	≤5 % (end of scale)
Repeat accuracy	≤2 %

, ,		
Temperature error	≤0.05 %/°C	
Measuring circuit		
Measuring variable	AC Sinus (16.6 to 400 Hz)	
Measuring range	each AC 5 A	
Overload capability	6 A permanent each	
Input resistance	10 mΩ	
Switching threshold min.	5 % – 95 % U _N	
Switching threshold max.	10 % – 100 % U _N	
Over voltage category	III acc. IEC 60664-1	

4 kV

Measurement surge voltage **Environmental conditions**

Available with a lead time

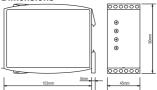
Temperature range according to UL	-25 °C +40 °C	
Temperature range	-25 °C +55 °C	
Storage temperature range	-25 °C +70 °C	
Relative air humidity	15 % to 85 % acc. IEC 60721-3-3 Class 3K3	
Degree of polution	3	
Vibration resistance	10 – 55 Hz 0.35 mm acc. IEC60068-2-6	
Impact resistance	15 g 11 ms acc. IEC 60068-2-27	
Approvals	cULus	



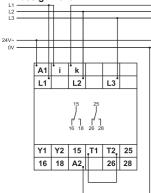
Load sensor 1 and 3-phase loads **AC 480 V**



Dimensions



PIN assignment



Description		Part-No.	Туре	PU
Load sensor				
	1 and 3-phase loads	750680 S *	LCR-PW-3-480-D-2U-24-240	1

True power monitoring for 1 and 3-phase loads

with 48 settable thresholds (P1, P2)

separately adjustable start-up suppression and trigger delay

selectable error memory
Temperature monitoring of the motor coil with max. 6 PTC

One reset button;

function selection via rotary switch

2MIN: Minimum monitoring

2MIN+I< ON: Minimum monitoring and recognition of shut-down consumers as GOOD status

2MIN+I< Inv: Minimum monitoring and recognition of shut-down consumers as errors 2MAX: Maximum monitoring

2MAX+I< ON: Maximum monitoring and recognition of shut-down consumers as errors
2MAX+I< Inv: Maximum monitoring and recognition of shut-down consumers as GOOD status
WIN: Monitoring the range between thresholds Min and Max

WIN+I< ON: Monitoring the range between the Min and Max thresholds and recognition of shut-down consumers as

WIN+I< Inv: Monitoring the range between the Min and Max thresholds and recognition of shut-down consumers as

MAX/MIN: Maximum/minimum monitoring
MAX/MIN+I< ON: Maximum/minimum monitoring and Monitoring the range and recognition of shut-down consumers as

MAX/MIN+I< Inv: Maximum/minimum monitoring and Monitoring the range and recognition of shut-down consumers as

Time	range
O	

Start-up suppression, settable	0 – 100 s	
trigger delay, settable	0.1 – 50 s	
Status indication		
Supply status	LED green	
Start bridge status	LED green flashing	
Output relay status	LED yellow	
Threshold error status	LED red	
Trigger delay status	LED red flashing	
Status I/O	LED yellow	
Over-temperature status	LED red	
Housing		
Dimensions (w × h × d)	45.0 × 90.0 × 105.0 mm	
Color of the housing	light grev	

cULus

Housing material PA 6.6 V0 Protection class IP20

1×0.5 to 2.5 mm 2 with AE 1×4 mm 2 without AE 2×0.5 to 1.5 mm 2 with AE 2×2.5 mm 2 without AE Connection cross-section

Installation position any 0.400 kg/piece Weight

Approvals Supply circuit

Rated voltage range AC/DC 24 V - 240 V Tolerance

AC: -15 %/+10 %, DC: -20 %/+25 % 16 Hz @ AC 24 V, 48 Hz – 400 Hz @ AC 24 V – 240 V Rated frequency

Power consumption 3.5 VA (3 W) Operating time 100 % ED Recovery time 500 ms >30 % of the supply voltage Voltage drop III acc. IEC 60664-1 Over voltage category

Measurement surge voltage 4 kV

Output circuit		
Number of channels	2	
Switching element	Relays	
Contact type	Change over contact	
Measurement voltage	AC 250 V	
Switching voltage	AC 250 V	
Switching current max.	3A (5A at a distance >5mm)	
Protection device	5 A, quick-acting	
Mechanical service life	20 × 10 ⁶ (1000 VA)	
Electrical service life	2 × 10 ⁵ (1000 VA)	
Switching frequency	60/min @100 VA, 6/min @ 1000 VA	
Over voltage category	III acc. IEC 60664-1	
Measurement surge voltage	4 kV	

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

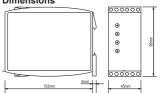
Accuracy	
Basic accuracy	±2 % (end of scale)
Frequency response	±0.025 %/Hz
Tolerance of setting	≤5 % (end of scale)
Repeat accuracy	≤2 %
Temperature error	±0.02 %/°C
Measuring circuit	
Measuring variable	0.75 kW, 1.5 kW, 3 kW, 6 kW reversible
Wave form AC Sinus	10 – 400 Hz
Wave form PWM	10 – 100 Hz (sine-assessed)
Measurement input 1-phase	AC 0 – 480 V
Measurement input 3-phase	3ph 0 – 480/277 V
Overload capability	550 V (1-phase), 550/318 V (3-phase)
Input resistance	1.25 ΜΩ
Measurement input current, 1-pha- se	0.15A – 6A (0.75 – 1.5 kW), 0.3 – 12 A (3 – 6 kW)
Overload capability current	12 A permanent
Current interruption	150 mA (0.75 – 1.5 kW), 180 mA (3 – 6 kW)
Current flow sensor	300 mA (0.75 – 1.5 kW), 360 mA (3 – 6 kW)
Switching threshold P1	10 % – 120 % from P _N
Switching threshold P2	5 % – 110 % from P _N
Hysteresis	1 % @ Maximum measuring range'
Over voltage category	III acc. IEC 60664-1
Measurement surge voltage	4 kV
Temperature monitoring	
Sum of cold resistance	<1.5 kΩ
Response value	≥3.6 kΩ (relay drops)
Drop-off value	≤1.8 kW (Relay is energised)
Line short-circuit	No shut-off
Measurement voltage	≤7.5 V at R ≤4.0 kW (acc. IEC 60947-8)
Control input	((
Function	Fault store
Load	none
Cable length	10 m max., twisted
Reset	NC contact in supply circuit
Environmental conditions	
Temperature range according to UL	-25 °C +40 °C
Temperature range	-25 °C +55 °C
Storage temperature range	-25 °C +70 °C
Relative air humidity	15 % to 85 % acc. IEC 60721-3-3 Class 3K3
Degree of polution	3
Vibration resistance	10 – 55 Hz 0.35 mm acc. IEC60068-2-6
Impact resistance	15 g 11 ms acc. IEC 60068-2-27
Approvals	cULus
· ·	<u> </u>



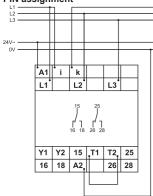
Load sensor 1 and 3-phase loads **AC 690 V**



Dimensions



PIN assignment



Description		Part-No.	Туре	PU
Load sensor				
	1 and 3-phase loads	750681 S *	LCR-PW-3-690-D-2U-24-240	1

True power monitoring for 1 and 3-phase loads

with 48 settable thresholds (P1, P2)

separately adjustable start-up suppression and trigger delay

selectable error memory
Temperature monitoring of the motor coil with max. 6 PTC

One reset button;

function selection via rotary switch

2MIN: Minimum monitoring

2MIN+I< ON: Minimum monitoring and recognition of shut-down consumers as GOOD status

2MIN+I< Inv: Minimum monitoring and recognition of shut-down consumers as errors 2MAX: Maximum monitoring

2MAX+I< ON: Maximum monitoring and recognition of shut-down consumers as errors

ZMAX+I Inv: Maximum monitoring and recognition of shut-down consumers as GOOD status WIN: Monitoring the range between thresholds Min and Max

WIN+I< ON: Monitoring the range between the Min and Max thresholds and recognition of shut-down consumers as

GOOD status

WIN+I< Inv: Monitoring the range between the Min and Max thresholds and recognition of shut-down consumers as errors

MAX/MIN: Maximum/minimum monitoring

MAX/MIN+I< ON: Maximum/minimum monitoring and Monitoring the range and recognition of shut-down consumers as

MAX/MIN+I< Inv: Maximum/minimum monitoring and Monitoring the range and recognition of shut-down consumers as

MAX/MIN+I=0 ON: Maximum/minimum monitoring and recognition of shut-down consumers as ERROR or GOOD status

Time range			
Start-up suppression, settable		0 – 100 s	
trigger delay, settable		0.1 – 50 s	
Status indication			
Supply status		LED green	
Start bridge status		LED green flashing	
Output relay status		LED yellow	
Threshold error status		LED red	
Trigger delay status		LED red flashing	
Status I/O		LED yellow	
Over-temperature status		LED red	
Housing			
Dimensions (w × h × d)		45.0 × 90.0 × 105.0 mm	
Color of the housing		light grey	
Housing material		PA 6.6 V0	
Protection class		IP20	

cULus

Protection class	IP20
Connection cross-section	1×0.5 to 2.5 mm ² with AE 1×4 mm ² without AE 2×0.5 to 1.5 mm ² with AE 2×2.5 mm ² without AE
Installation position	any

Weight 0.400 kg/piece

Approvals

Supply circuit

Rated voltage range AC/DC 24 V - 240 V AC: -15 %/+10 %, DC: -20 %/+25 % 16 Hz @ AC 24 V, 48 Hz – 400 Hz @ AC 24 V – 240 V Tolerance

Rated frequency Power consumption 3.5 VA (3 W)

Operating time 100 % ED Recovery time 500 ms >30 % of the supply voltage Voltage drop

III acc. IEC 60664-1 Over voltage category Measurement surge voltage $4 \, kV$

Output circuit		
Number of channels	2	
Switching element	Relays	
Contact type	Change over contact	
Measurement voltage	AC 250 V	
Switching voltage	AC 250 V	
Switching current max.	5A (3A)	
Protection device	5 A, quick-acting	
Mechanical service life	20 × 10 ⁶ (1000 VA)	
Electrical service life	2 × 10 ⁵ (1000 VA)	
Switching frequency	60/min @100 VA, 6/min @ 1000 VA	
Over voltage category	III acc. IEC 60664-1	
Measurement surge voltage	4 kV	



^{*} S Article from stock

Available with a lead time

Accuracy ±2 % (end of scale) Basic accuracy ±0.025 %/Hz Frequency response Tolerance of setting ≤5 % (end of scale) Repeat accuracy ≤2 % ±0.02 %/°C Temperature error Measuring circuit 2 kW, 4 kW, 8 kW, 16 kW reversible Measuring variable Wave form AC Sinus 10 – 400 Hz Wave form PWM 10 - 100 Hz (sine-assessed) Measurement input 1-phase AC 42 – 690 V 3ph 42 – 690/400 V Measurement input 3-phase Overload capability 796 V (1-phase), 796/460 V (3-phase) Input resistance 1.25 MΩ Measurement input current, 1-pha-0.20A – 8 A (2 kW, 4 kW), 0.4 – 16 A (8 kW, 16 kW), for I>16 A clearance >5 mm Overload capability current 18 A permanent 200 mA (2 kW,4 kW), 400 mA (8 kW, 16 kW) Current interruption 240 mA (2 kW, 4 kW), 480 mA (8 kW, 16 kW) Current flow sensor Switching threshold P1 10 % – 120 % from P_N Switching threshold P2 5% - 110% from P_N Hysteresis 1 % @ Maximum measuring range' Over voltage category III acc. IEC 60664-1 Measurement surge voltage 4 kV Temperature monitoring Sum of cold resistance <1.5 kΩ ≥3.6 kΩ (relay drops) Response value Drop-off value ≤1.8 kW (Relay is energised) Line short-circuit No shut-off ≤7.5 V at R ≤4.0 kW (acc. IEC 60947-8) Measurement voltage Control input Function Fault store Load none Cable length 10 m max., twisted Reset NC contact in supply circuit **Environmental conditions** Temperature range according to UL -25 °C ... +40 °C -25 °C ... +55 °C Temperature range -25 °C ... +70 °C Storage temperature range Relative air humidity 15 % to 85 % acc. IEC 60721-3-3 Class 3K3 Degree of polution 3 acc. IEC 60664-1 Vibration resistance 10 - 55 Hz 0.35 mm acc. IEC60068-2-6 15 g 11 ms acc. IEC 60068-2-27 Impact resistance cULus

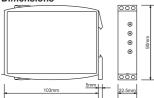


Approvals

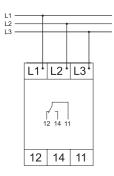
Phase sequence and asymmetry



Dimensions



PIN assignment



Description	Part-No.	Туре	PU
Phase sequence and asymmetry			
	750610 S *	LCR-PH-3-1-1U	1
Time range			
Switch-on delay		400 ms	
Switch-off delay		<250 ms	
Status indication			
Supply status		LED green	
Output relay status		LED yellow	
Housing			
Dimensions (w × h × d)	22.5	< 67.0 × 76.0 mm	
Color of the housing		light grey	
Housing material		PA	
Protection class		IP20	
Connection device	Sci	rewed terminal	
Connection cross-section	AW	G 20 – AWG 13	
Connection cross-section	0.5 –	2.5 mm ² with AE	
Installation position		any	
Weight	0	082 kg/piece	
Approvals		cULus	
Supply circuit			
Rated voltage range	AC 120	/208 V – 277/488 V	
Tolerance	-	10 %/+10 %	
Rated frequency	50 – 6	0 Hz (48 – 63 Hz)	
Power consumption		0.9 W/VA	
Operating time		100 % ED	
Recovery time		>500 ms	
Waveform AC		Sinus	
Residual ripple		10 %	
Voltage drop	>	121 V/171 V	
Output circuit	_	121 0,111 0	
Number of channels		1	
Switching element		Relays	
Contact type	Char	nge over contact	
Measurement voltage		0 V (IEC 60947-1)	
Switching voltage	AC 23	AC 250 V	
Switching current max.	AC-1: 8A/250V, AC-15: 1.5A/240		13.0 14/250//
Protection device		A, quick-acting	-13. 0.17/2301
Mechanical service life	07	30 × 10 ⁶	
Electrical service life	1	× 10 ⁵ (AC-1)	
		min with load	
Switching frequency	0/	IIIIII WIIII IOau	
Accuracy	~E 0	/ (and of scale)	
Basic accuracy		% (end of scale) % (end of scale)	
Tolerance of setting	≤5 %	% (end or scale) ≤1 %	
Repeat accuracy		≤1 % ≤0.05 %/°C	
Temperature error		≥0.03 %/ C	
Measuring circuit	AO C:	40 to 60 H=\ 2 =	
Measuring variable		48 to 63 Hz), 3-phase	
External fuse		A (acc. UL 601010)	
Measuring range	•) AC 400/230 V	
Measuring procedure		ectified value	
Monitored functions		e, phase failure, asymmetry	
Overload capability	see tolera	ance of power supply	
Input resistance		3 ΜΩ	
Asymmetry	5	% – 25 %, Off	
Environmental conditions			
Temperature range		5 °C +60 °C	
Storage temperature range) °C +70 °C	
Relative air humidity		c. IEC 60721-3-3 Class 3K3	
Vibration resistance		mm 13.2 – 100 Hz 7 m/s ²	
Impact resistance	15 g 11 ms	s acc. IEC 60068-2-27	
Approvals		cULus	



A Available with a lead time

Interface Technology · LCIS accessories

Labeling system Labelling tabs 5 × 5 mm 20 rows of 10 tabs



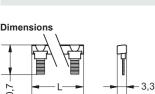
Description		Part-No.	Туре	PU	
Labelling plates					
Color	white	716431 S *	LOCC-Box-BZW 7-643	1 1	
	red	716432 S *	LOCC-Box-BZR 7-6432	2 1	
	blue	716433 S *	LOCC-Box-BZB 7-6433	3 1	
	yellow	716434 A *	LOCC-Box-BZG 7-6434	1 1	
General	716431	716432	716433	716434	
Color	white	red	blue	yellow	
Design		Frame w	rith 20 strips à 10 signs		
Material		PA 6.6 (UL 94 V0, NNF I2, F2)		
Operation temperature range	-40 °C +80 °C				
Storage temperature range		-4	10 °C +80 °C		
Weight			kg/piece		
Dimensions			5 × 5 mm		

Interface Technology · LCIS accessories

Weight

Insulated jumper combs 2 to 16-pin white





Description		Part-No.		Туре		PU
Jumper comb						
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	762813.10	00	762823.1000	762833.1000	
Pole number	2	4		8	16	
Connection device			plu	ıg-in		
Rated current			DC	6 A		
Contact design		Flat contact 0.5	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			Cı	uZn		
Material		V	ectra	C 1330		
Color	white					
Flamability according to UL 94			١	V 0		
Operation temperature range		-40	°C.	+80 °C		
Storage temperature range		-40	°C .	+80 °C		

0.001 kg/piece

0.0005 kg/piece

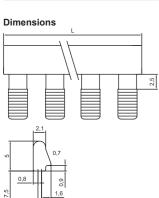
0.002 kg/piece

0.004 kg/piece

Interface Technology · Accessories

Insulated jumper combs 2 to 16-pin white



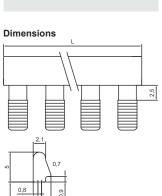


Description		Part-No.	Type			PU	
Jumper comb							
Color	white	762803	S* BK 7-2	803 WE 2-polig		10	
	white	762806	S* BK 7-2	806 WE 3-polig		10	
	white	762813	S* BK 7-2	813 WE 4-polig		10	
	white	762823	S * BK 7-2	823 WE 8-polig		10	
	white	762833	S* BK 7-2	833 WE 16polig		10	
General	762803	762806	762813	762823	762833		
Pole number	2	3	4	8	16		
Connection device	plug-in						
Rated current			DC 6 A				
Contact design		Flat conta	ct 0.5 mm Ribbing	on the sides			
Pin spacing			6.2 mm				
Length	12.4 mm	18.6 mm	24.8 mm	49.6 mm	99.2 mm		
Contact material			CuZn				
Material			Vectra C 1330				
Color			white				
Flamability according to UL 94			V0				
Operation temperature range			-40 °C +80 °C				
Storage temperature range			-40 °C +80 °C				
Weight	0.001 kg/piece	0.0015 kg/ piece	0.002 kg/piece	0.003 kg/piece	0.004 kg/piece		

Interface Technology · Accessories

Insulated jumper combs 2 to 16-pin red



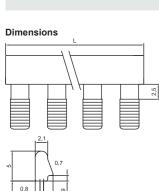


Description		Part-No.	Type			PU			
Jumper comb									
Color	red	762802	S * BK 7-2	802 rt 2-polig		10			
	red	762805	S * BK 7-2	805 rt 3-polig		10			
	red	762812	S * BK 7-2	812 rt 4-polig		10			
	red	762822	S * BK 7-2	822 rt 8-polig		10			
	red	762832	S * BK 7-2	832 rt 16polig		10			
General	762802	762805	762812	762822	762832				
Pole number	2	3	4	8	16				
Connection device	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	18.6 mm	24.8 mm	49.6 mm	99.2 mm				
Contact material	CuZn								
Material	Vectra C 1330								
Color			red						
Flamability according to UL 94	V0								
Operation temperature range	-40 °C +80 °C								
Storage temperature range			-40 °C +80 °C						
Weight	0.001 kg/piece	0.0015 kg/ piece	0.002 kg/piece	0.003 kg/piece	0.004 kg/piece				

Interface Technology · Accessories

Insulated jumper combs 2 to 16-pin blue





Description		Part-No.	Type			PU			
Jumper comb									
Color	blue	762804	S* BK 7-2	2804 bl 2-polig		10			
	blue	762807	S * BK 7-2	2807 bl 3-polig		10			
	blue	762814	S* BK 7-2	2814 bl 4-polig		10			
	blue	762824	S * BK 7-2	2824 bl 8-polig		10			
	blue	762834	S* BK 7-2	2834 bl 16polig		10			
General	762804	762807	762814	762824	762834				
Pole number	2	3	4	8	16				
Connection device	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	18.6 mm	24.8 mm	49.6 mm	99.2 mm				
Contact material	CuZn								
Material			Vectra C 1330						
Color	blue								
Flamability according to UL 94	V0								
Operation temperature range	-40 °C +80 °C								
Storage temperature range			-40 °C +80 °	C					
Weight	0.001 kg/piece	0.0015 kg/ piece	0.002 kg/piece	0.003 kg/piece	0.004 kg/piece				

Part number index

Part-No.	Page	Part-No.	Page	Part-No.	Page	Part-No.	Page	Part-No.	Page
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716433	57	751539.0000	17						
716434	57	751557.0000	25						
750320	36	751809.0000	27						
750321	40	751817.0000	29						
750322	41	751819.0000	28						
750340	37	751839.0000	30						
750360	38	751847.0000	31						
750370	39	751848.0000	32						
750510.0000	22	751901.0000	26						
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750512.0000	23	762803	59						
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750517.0000	21	762805	60						
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750528.0000	15	762807	61						
750530.0000	18	762812	60						
750531.0000	18	762813	59						
750532.0000	18	762813.1000	58						
750533.0000	19	762814	61						
750534.0000	19	762822	60						
750535.0000	19	762823	59						
750536.0000	20	762823.1000	58						
750537.0000	20	762824	61						
750538.0000	20	762832	60 50						
750539.0000 750557.0000	17 25	762833 762833.1000	59 58						
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750817.0000 750819.0000	28								
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751510.0000	22								
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751517.0000	24								
751518.0000	21								
751519.0000	21								
751528.0000	15								
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751532.0000 751533.0000	18 19								
751533.0000	19								
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