

## Technical data sheet

Interface Technology · LCIS analogue/analogue converter

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**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, 3-way isolation**



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### Identification

Type	LCIS-WAA-MA-0518-175-S
Part No.	<a href="#">750518.0000</a>

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### Product version

Hardware revision	1.0
Software version	1.1
Datasheet version	01

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### Input

Input signal	0–10 V, 0–20 mA, 4–20 mA, adjustable via DIP switch S1
Galvanic isolation I/O	3-way isolation
Zero /Span	Production comparison
Input resistance	>330 k $\Omega$ @ 0–10 V, <100 $\Omega$ @ 0–20 mA, 4–20 mA

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### Output

Output signal	0–10 V, 0–20 mA, 4–20 mA adjustable via switch
Output voltage limit	min 0 V max 10.8 V for all output ranges with nominal upper limit 10 V
Output current limit	min. 0 mA for all output ranges with nominal lower limit 0 mA min. 3.6 mA or all output ranges 4 – 20 mA max. 21.6 mA for all output ranges with nominal upper limit 20 mA
Max. load impedance at I-output	500 $\Omega$ @ 0–20 mA, 4–20 mA
Min. load impedance at U-output	2 k $\Omega$ @ 0–10 V
Load deviation	at U-output max. 5 mV @ 2 k $\Omega$
Output voltage	<18 V @ 0–20 mA, 4–20 mA

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12.12.2023 • Subject to technical modification  
Part No. [750518.0000](#) • Datasheet version: 01

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Output current	max. 5 mA @ 0–10 V
Residual ripple	<20 mV <sub>eff</sub>

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#### Operating data

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Accuracy	0.1 % FSR @ 23 °C
Linearity error	0.05 % FSR
Rise time (10-90%)	6 ms
Build-up time (Accuracy 1%)	17 ms
Temperature coefficient	<150 ppm / K FSR
Critical frequency	30 Hz @ 3 dB

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#### General

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Rated voltage U <sub>N</sub>	AC/DC 24 V
Current Consumption	19 mA
Status indication	LED green
Input/output protection	Overvoltage, current input with PTC fuse, short circuit-proof output
Insulation voltage input / output	2.5 kV <sub>eff</sub>
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)
Degree of protection	IP20
Installation position	Any
Connection type	Screwed terminal single wire 0.25 mm <sup>2</sup> – 2.5 mm <sup>2</sup> / AWG 24–14 fine stranded wire with ferrule 0.25 mm <sup>2</sup> – 1.5 mm <sup>2</sup> / AWG 24–16
Strip length	6 mm
Dimensions (w × h × d)	17.5 mm × 93.0 mm × 75.0 mm
Weight/unit	0.059 kg
PU (units)	1

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#### General ambient conditions

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Operation temperature range	-25 °C ... +60 °C
Storage temperature range	-40 °C ... +80 °C
Relative air humidity	20 – 90 % RH, not condensing
Vibration resistance	0.7 g acc. to EN 60068-2-6

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#### Failure Rate Prediction (MTBF)

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Standards	Electronic components – Reliability – Reference conditions for failure rates and stress models for conversion: EN/IEC 61709 Failure Rates of Components – Expected values: SN 29500
Failure rate at +45 °C	724 fit
Failure rate at +45 °C	1381278 h

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## Technical data sheet

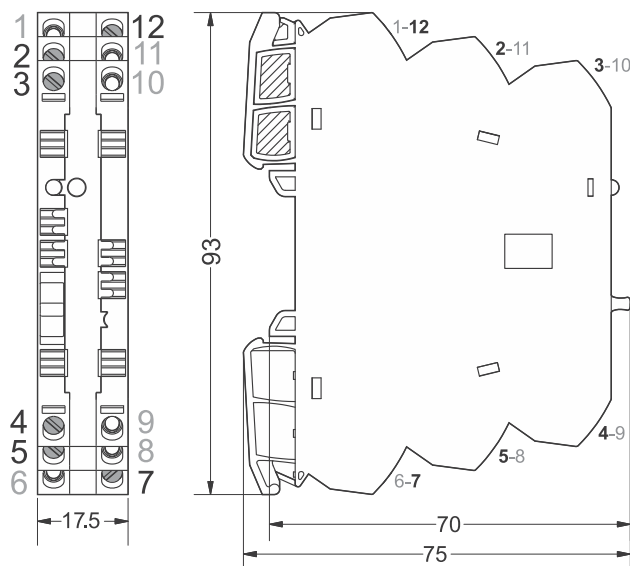
### Interface Technology · LCIS analogue/analogue converter

Comments	1 fit equals one failure per $10^9$ component hours
	The indicated temperature is the mean component ambient temperature.
	The results are valid under following conditions: Automotive environment or industrial areas without extreme dust levels and harmful substances
	Continuous operation 8760 h per year

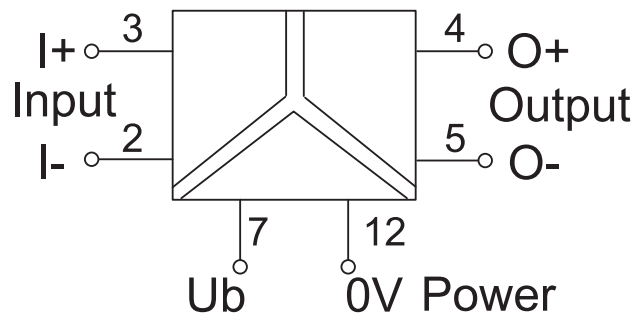
### Certifications/Standards

Conformity	CE UKCA
Certifications	cULus (E135145) DNV (TAA000024Y)
Standards	EN 60947-1 EN 60947-5-1 EN 61000-6-2 EN 61000-6-4 UL 508 DNV-CG-0339

### Dimensions



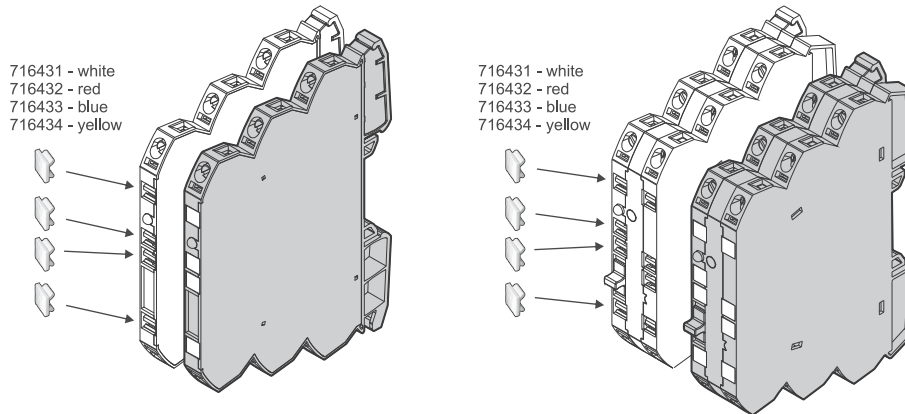
### PIN assignment



# Technical data sheet

## Interface Technology · LCIS analogue/analogue converter

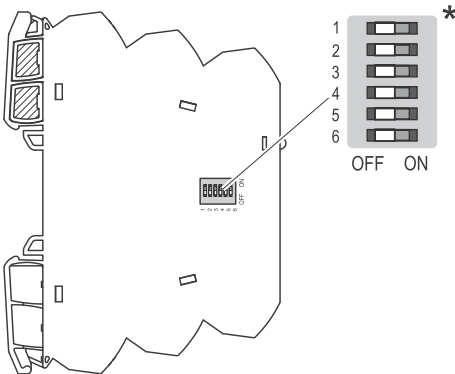
### Use



### Use

#### DE DIP-Schalterstellungen EN DIP switch positions FR Positions des interrupteurs DIP

**DE HINWEIS:** Die Schalter dürfen während des Betriebs nicht umgeschaltet werden. Der Wandler benötigt einen Neustart.  
**EN NOTICE:** The switches must not be switched during operation. The converter requires a restart.  
**FR AVIS:** Les interrupteurs ne doivent pas être actionnés pendant le fonctionnement. Le convertisseur nécessite un redémarrage.



\* DE: Auslieferungszustand (Werkseinstellung): 0-Einstellung/ alle Schalter sind auf OFF gestellt.  
**Je nach Art des Wandlers ist dann bereits ein bestimmter Bereich voreingestellt.**

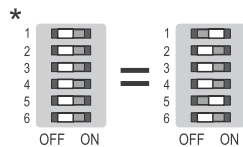
\* EN: Delivery state (factory setting): 0 setting/ all switches are set to OFF.  
**Depending on the type of transducer, a certain range is then already preset.**

\* FR: État à la livraison (réglage d'usine) : réglage 0/ tous les interrupteurs sont sur OFF.  
**Selon le type de transducteur, une certaine plage est alors déjà prédéfinie.**

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 751510.0000  
 751518.0000  
 751519.0000  
 750518.0000  
 750519.0000

S1	Input	1	2	3	4
●→Switch On					
0- 10V*		●			
0-20mA		●			
4-20mA		●	●		

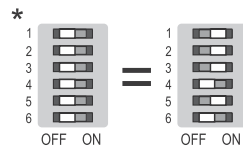
S1	Output	5	6
●→Switch On			
0- 10V*		●	
0-20mA		●	
4-20mA		●	●



750516.0000  
 750517.0000  
 751516.0000  
 751517.0000

S1	Input	1	2	3	4
●→Switch On					
0- 60 mV		●			
0- 100 mV		●			
0- 300 mV		●			
0- 500 mV		●	●		
0- 1 V		●	●		
0- 2 V		●	●		
0- 5 V		●	●	●	
0- 10 V*		●	●	●	
2- 10 V		●	●	●	●
0- 20 V		●	●	●	●
0- 5 mA		●	●	●	●
0- 10 mA		●	●	●	●
± 5 mA		●	●	●	●
± 20 mA		●	●	●	●
0- 20 mA		●	●	●	●
4- 20 mA		●	●	●	●

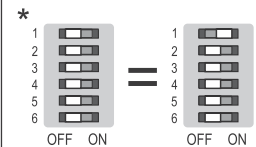
S1	Output	5	6
●→Switch On			
0- 10 V*		●	
0- 20 mA		●	
4- 20 mA		●	●



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 751512.0000

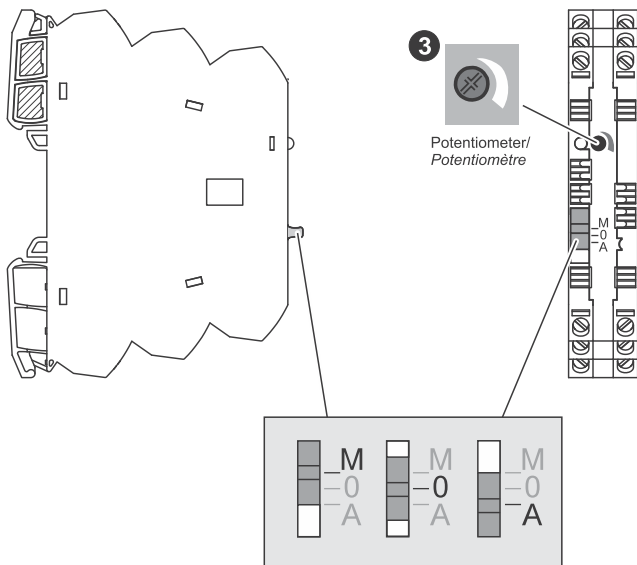
S1	Input	1	2	3	4
●→Switch On					
0- 10 V*		●			
0- 20 mA		●			
4- 20 mA		●	●		

S1	Output	5	6
●→Switch On			
0- 50 Hz*		●	
0- 100 Hz		●	
0- 1000 Hz		●	●
0- 10000 Hz		●	●



### Use

**DE** Schalterstellungen M-0-A **EN** Switch Positions M-0-A **FR** Positions des interrupteurs M-0-A



#### M - manuell/ manually/ manuellement:

- DE** Mit dem Potentiometer (3) kann der Ausgangswert eingestellt werden: (0-10V oder 0-20mA oder 4-20mA)
- EN** With the potentiometer (3) the output value can be set: (0-10V or 0-20mA or 4-20mA)
- FR** Le potentiomètre (3) permet de régler la valeur de sortie: (0-10V ou 0-20mA ou 4-20mA)

#### 0 - ausgeschaltet/ switched off/ désactivé:

- DE** Der Wandler ist am Ausgang ausgeschaltet, das heißt: 0V oder 0mA oder 4mA.
- EN** The converter is switched off at the output, that means: 0V or 0mA or 4mA.
- FR** Le convertisseur est désactivé à la sortie, c'est-à-dire: 0V ou 0mA ou 4mA.

#### A - Automatik/ Automatic/ Automatique:

- DE** Hier wird der Eingangswert automatisch in den Ausgangswert umgewandelt.
- EN** Here the input value is automatically converted to the output value.
- FR** Ici, la valeur d'entrée est automatiquement convertie en valeur de sortie.

### Range adjustment

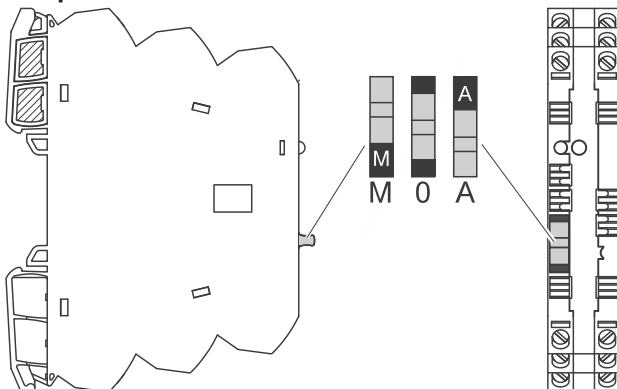
S1	Input
● → Switch On	1 2 3 4
0-10V*	●
0-20mA	●
4-20mA	● ●

S1	Output
● → Switch On	5 6
0-10V*	●
0-20mA	●
4-20mA	● ●



Default (1-6 = OFF)

### Switch position



**M:** **DE** Ausgangssignal wird durch Potentiometer bestimmt  
**EN** Output signal determined by potentiometer  
**FR** Signal de sortie déterminé par potentiomètre

**0:** **DE** Ausgangssignal auf Minimum  
**EN** Output signal at low level  
**FR** Signal de sortie à bas niveau

**A:** **DE** Ausgangssignal wird durch Eingangssignal bestimmt  
**EN** Output signal is determined by the input signal  
**FR** Le signal de sortie est déterminé par le signal d'entrée