

Technical data sheet

Interface Technology · LCIS analogue/analogue converter

Input: 0–10 V / 0–20 mA / 4–20 mA, manual off automatic

Output: 0–10 V / 0–20 mA / 4–20 mA

Insulation: 2.5 kV, 3-way isolation



Identification

Type LCIS-WAA-MA-1518-175-PI
Part No. [751518.0000](#)

Product version

Hardware revision 1.0
Software version 1.2
Datasheet version 02

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 Ω @ 0–10 V, <100 Ω @ 0–20 mA, 4–20 mA

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 for 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 Ω @ 0–20 mA, 4–20 mA
Min. load impedance at U-output 2 k Ω @ 0–10 V
Load deviation at U-output max. 5 mV @ 2 k Ω
Output voltage <18 V @ 0–20 mA, 4–20 mA

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Part No. [751518.0000](#) • Datasheet version: 02

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Output current	Max. 5 mA @ 0–10 V
Residual ripple	<20 mV _{eff}

Operating data

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

General

Rated voltage U _N	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 _{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)
Degree of protection	IP20
Installation position	Any
Connection type	Push-In Single wire 0.25 mm ² – 2.5 mm ² / AWG 24–14 Fine stranded wire with ferrule 0.25 mm ² – 1.5 mm ² / AWG 24–16
Strip length	8 mm
Dimensions (w × h × d)	17.5 mm × 93.0 mm × 75.0 mm
Weight/unit	0.059 kg
PU (units)	1

General ambient conditions

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

Failure Rate Prediction (MTBF)

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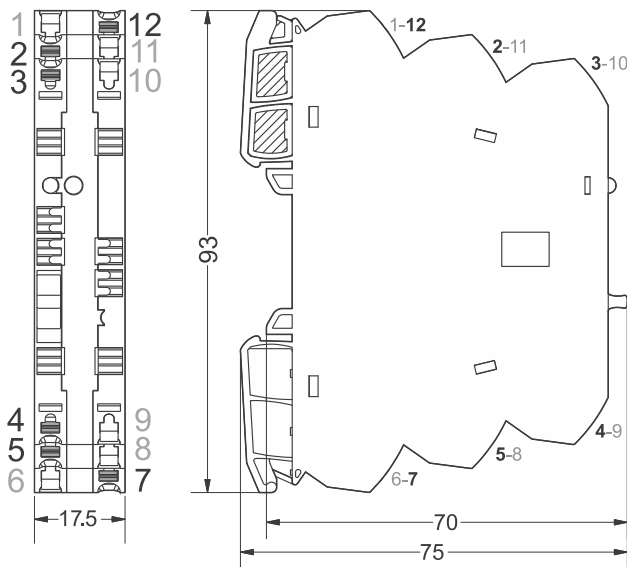
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Comments	1 fit equals one failure per 10 ⁹ component hours
	The indicated temperature is the mean component ambient temperature.
	The results are valid under following conditions: Automotive environment or industrial areas without extreme dust levels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

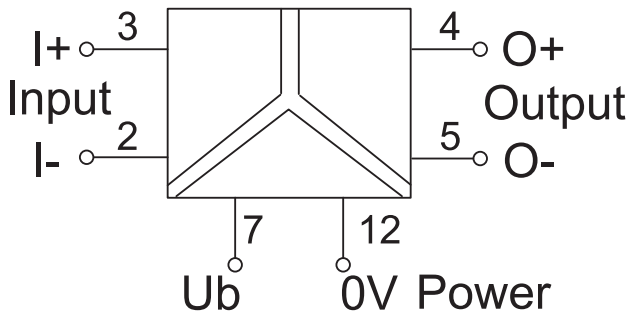
Certifications/Standards

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



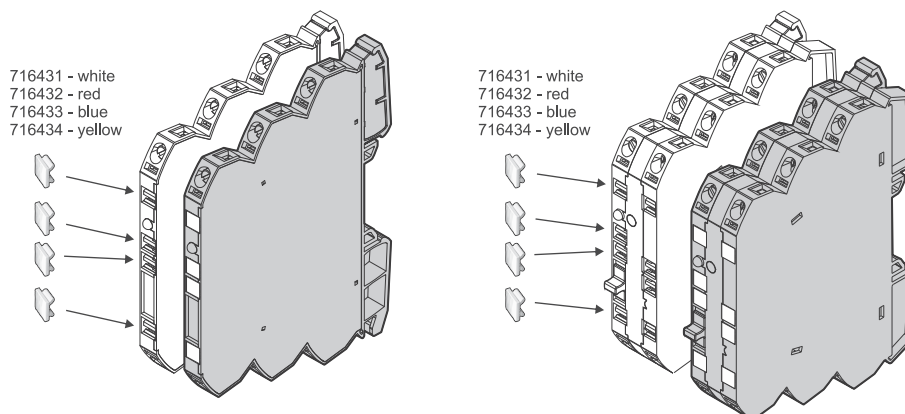
PIN assignment



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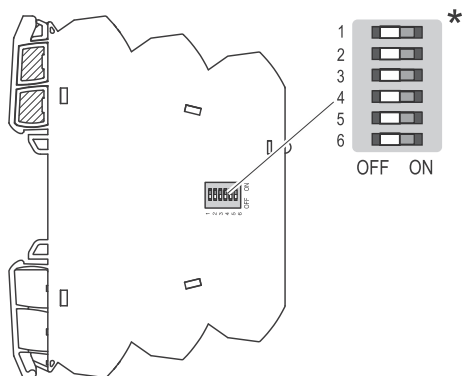
Use



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.

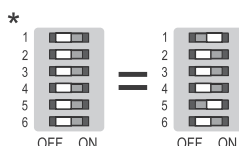
* EN: Delivery state (factory setting): 0 setting/ all switches are set to OFF.
 Depending on the type of transducer, a certain range is then already preset.

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

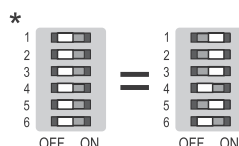
S1	Output
●→Switch On	5 6
0- 10V*	●
0-20mA	●
4-20mA	●



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 750517.0000
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 751517.0000

S1	Input
●→Switch On	1 2 3 4
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	●

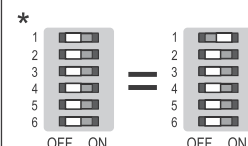
S1	Output
●→Switch On	5 6
0- 10 V*	●
0- 20 mA	●
4- 20 mA	●



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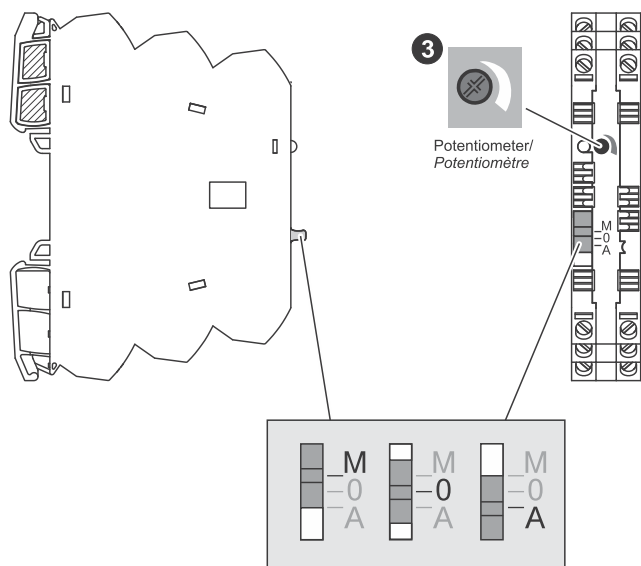
S1	Input
●→Switch On	1 2 3 4
0- 10 V*	●
0- 20 mA	●
4- 20 mA	●

S1	Output
●→Switch On	5 6
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, dass 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

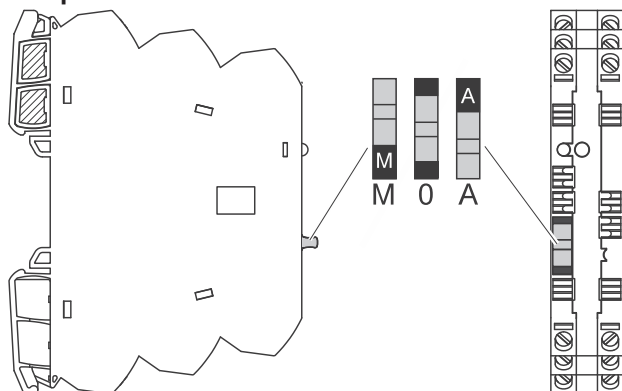
S1	Input
●→Switch On	1 2 3 4
0-10V*	●
0-20mA	●
4-20mA	●

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

*	ON	OFF
1	●	
2	●	
3	●	
4	●	
5	●	
6	●	

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