# Programmable analogue signal converters

**NOTES** 

- 1.5 kV, 3 ways, IN/OUT/supply voltage isolation
- 3 programmable input range
- 3 programmable output range
- Simple programming and self calibrating

The dimensions includes the DIN clamp.

(1) range 16.8...30 Vdc / 19.2...28.8 Vac (2) range 16.8...264 Vdc / 19.2...264 Vac

(3) 3-way isolation: IN/OUT/power supply



U,I

6

Power supply 24 Vac/dc

4 OUT+

5. OUT-

CULUS CE

IN+ • 3

IN- <u>2</u>

blue

U,I

1

#### **BLOCK DIAGRAM**

VERSIONS		Cod. X756539	—	APPLICATIONS
24 Vac/dc supply voltage		CWNAA-7-0539		Multi-function converters can be
24-240 Vac/dc supply voltage			_	used to convert and isolate th
				most common standard analogu
<b>INPUT TECHNICAL DATA</b>				signals; the input and the output
Input signal		010 V 020 / 420 mA		can be set up into 3 different signa ranges. The set up is possible by
Input resistance		330 k $\Omega$ with input voltage 100 $\Omega$ with input current		simply switching the position o a dip switch on the side of the
<b>OUTPUT TECHNICAL DATA</b>				module. The input / output combinations
Output signal		010 V		offered by these modules provide
ouput signal		020 / 420 mA		the most common input/output
Applicable load		>1 k $\Omega$ with output voltage <400 $\Omega$ with output current		configurations more economically when compared to 14 input / 3
			1	output modules and reduces inventory.
<b>GENERAL TECHNICAL DATA</b>				If a single signal must provide
Supply voltage		24 Vac/dc (1)		several output channels it is
Rated current		$\leq 35$ mA $\pm$ 10% @ 24 Vdc		possible to use many modules
Accuracy		0.1% @ 23°C FS		connecting their inputs in paralle
Trasmission frequency		< 30 Hz		as long as the signal is voltage, or in
Temperature coefficient		0.02% / K FS		series when signal is current.
Isolation		1.5 kVac / 60 s (3)		
ECM standards		EN 61000-6-2, EN 61000-6-4		
Reference Standard		IEC 664-1, DIN VDE		
Overvoltage category/Pollution degree		III / 2		
Protection degree		IP 20 IEC 529, EN60529		
Operating temperature range		-25+60°C		
Connection terminal		2.5 mm <sup>2</sup> fixed screw type		
Housing material		Noryl UL94V-0		
Approx. weight		40 g		
Mounting information		vertical on rail adjacent without gap		
MOUNTING ACCESSORIES				
Mounting rail type according to IEC60715/TH35-7.5		PR/3/AC, PR/3/AC/Z	B, PR/3/AS, PR/3/AS/ZB	
Mounting rail type according to IEC60715/G32				
Plug-in jumper	red	CWBK 7-0802 cod. X766802	_	
(16 poles, 16 A)	white	CWBK 7-0803 cod. X766803 CWBK 7-0804 cod. X766804		

CWBK 7-0804 cod. X766804

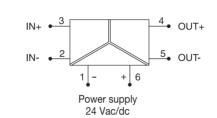
# **Analogue signal converters**

- 1.5 kV, 3 ways, IN/OUT/supply voltage isolation
- Fixed value
- Compact dimension, 6.2 mm pitch



#### **NOTES** The dimensions includes the DIN clamp. (1) range 16.8...30 Vdc / 19.2...28.8 Vac (2) 3-way isolation: IN/OUT/power supply

(16 poles, 16 A)



**BLOCK DIAGRAM** 

VERSIONS		Cat. No. X756530	Cat. No. X756531	Cat. No. X756532
IN: 010 V / OUT: 010 V		CWAA 7-0530		
IN: 010 V / OUT: 020 mA			CWAA 7-0531	
IN: 010 V / OUT: 420 mA				CWAA 7-0532
INPUT TECHNICAL DATA				
Input signal		010 V	010 V	010 V
Input resistance		330 kΩ	330 kΩ	330 kΩ
OUTPUT TECHNICAL DATA				
Output signal		010 V	020 mA	420 mA
Applicable load		>1 kΩ	<400 Q	<400 Q
		>1 K52	400 32	<400 32
<b>GENERAL TECHNICAL DATA</b>				
Supply voltage		24 Vac/dc (1)	24 Vac/dc (1)	24 Vac/dc (1)
Rated current		$\leq$ 13 mA $\pm$ 10%	≤ 13 mA ± 10%	≤ 13 mA ± 10%
Accuracy		0.1% @ 23°C FS	0.1% @ 23°C FS	0.1% @ 23°C FS
Trasmission frequency		< 30 Hz	< 30 Hz	< 30 Hz
Temperature coefficient		0.02% / K FS	0.02% / K FS	0.02% / K FS
Isolation		1.5 kVac / 60 s (2)	1.5 kVac / 60 s (2)	1.5 kVac / 60 s (2)
ECM standards		EN 61000-6-2, EN 61000-6-4	EN 61000-6-2, EN 61000-6-4	EN 61000-6-2, EN 61000-6-4
Reference Standard		IEC 664-1, DIN VDE	IEC 664-1, DIN VDE	IEC 664-1, DIN VDE
Overvoltage category/Pollution degree		III / 2	III / 2	III / 2
Protection degree		IP 20 IEC 529, EN60529	IP 20 IEC 529, EN60529	IP 20 IEC 529, EN60529
Operating temperature range		-25+60°C	-25+60°C	-25+60°C
Connection terminal		2.5 mm <sup>2</sup> fixed screw type	2.5 mm <sup>2</sup> fixed screw type	2.5 mm <sup>2</sup> fixed screw type
Housing material		PPE	PPE	PPE
Approx. weight		40 g (1.41 oz)	40 g (1.41 oz)	40 g (1.41 oz)
Mounting information		vertical on rail adjacent without gap	vertical on rail adjacent without gap	vertical on rail adjacent without gap
<b>MOUNTING ACCESSORIES</b>			 	 
Mounting rail type according to IEC60715/TH35-7.5		PR/3/4	IC, PR/3/AC/ZB, PR/3/AS, PR/3	AS/7B
Mounting rail type according to IEC60715/G32		11/0/7		
Plug-in jumper	red		CWBK 7-0802 Cat. No. X766803	)
(10) 1 (0)	100			

NUCLOUTINED
to IEC60715/TH35-7.5
to IEC60715/G32
red
white

blue

CWBK 7-0802 Cat. No. X766802 CWBK 7-0803 Cat. No. X766803 CWBK 7-0804 Cat. No. X766804

#### **APPLICATIONS**

ese converters can be used to nvert and isolate the most comn standard analogue signals; ch model is designed for a sininput output signal function, they are the right solution in plications where many modules ndling the same signal are used, ere they allow a large cost reduccompared with multi function dules. These modules are proed with 3 ways galvanic isolation tween input output and supply ltage. If a single signal must povide several output channels it possible to use many modules nnecting their inputs in parallel long as the signal is voltage, or series when the signal is current.

# **Analogue signal converters**

- 1.5 kV, 3 ways, IN/OUT/supply voltage isolation
- Fixed value

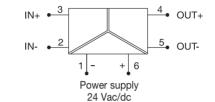
Plug-in jumper

(16 poles, 16 A)

Compact dimension, 6.2 mm pitch



**NOTES** The dimensions includes the DIN clamp. (1) range 16.8...30 Vdc / 19.2...28.8 Vac (2) 3-way isolation: IN/OUT/power supply **BLOCK DIAGRAM** 



VERSIONS	Cat. No. X756533	Cat. No. X756534	Cat. No. X756535
IN: 020 mA / OUT: 010 V	CWAA 7-0533		
IN: 020 mA / OUT: 020 mA		CWAA 7-0534	
IN: 020 mA / OUT: 420 mA			CWAA 7-0535
INPUT TECHNICAL DATA			
Input signal	020 mA	020 mA	020 mA
Input resistance	100 Ω	100 Ω	100 Ω
OUTPUT TECHNICAL DATA			
Output signal	010 V	020 mA	420 mA
Applicable load	>1 kΩ	<400 Ω	<400 Ω
CENERAL TEOUNIOAL DATA			
GENERAL TECHNICAL DATA		0414 (1 (1)	0111 (1)
Supply voltage	24 Vac/dc (1)	24 Vac/dc (1)	24 Vac/dc (1)
Rated current	$\leq 13 \text{ mA} \pm 10\%$	$\leq 13 \text{ mA} \pm 10\%$	$\leq 13 \text{ mA} \pm 10\%$
Accuracy	0.1% @ 23°C FS	0.1% @ 23°C FS	0.1% @ 23°C FS
Trasmission frequency	< 30 Hz	< 30 Hz	< 30 Hz
Temperature coefficient	0.02% / K FS	0.02% / K FS	0.02% / K FS
Isolation	1.5 kVac / 60 s (2)	1.5 kVac / 60 s (2)	1.5 kVac / 60 s (2)
ECM standards	EN 61000-6-2, EN 61000-6-4	EN 61000-6-2, EN 61000-6-4	EN 61000-6-2, EN 61000-6-
Reference Standard	IEC 664-1, DIN VDE	IEC 664-1, DIN VDE	IEC 664-1, DIN VDE
Overvoltage category/Pollution degree	III / 2	III / 2	III / 2
Protection degree	IP 20 IEC 529, EN60529	IP 20 IEC 529, EN60529	IP 20 IEC 529, EN60529
Operating temperature range	-25+60°C	-25+60°C	-25+60°C
Connection terminal	2.5 mm <sup>2</sup> fixed screw type	2.5 mm <sup>2</sup> fixed screw type	2.5 mm <sup>2</sup> fixed screw type
Housing material	PPE	PPE	PPE
Approx. weight	40 g (1.41 oz)	40 g (1.41 oz)	40 g (1.41 oz)
Mounting information	vertical on rail adjacent without gap	vertical on rail adjacent without gap	vertical on rail adjacent without ga
MOUNTING ACCESSORIES			
Mounting rail type according to IEC60715/TH35-7.5	PR/3/4	AC, PR/3/AC/ZB, PR/3/AS, PR/3	S/AS/ZB
Mounting rail type according to IEC60715/G32		—	
Diversity in the second	un al	OWDI/ 7 0000 0-+ N- V70000	n

red

white

blue

## APPLICATIONS

These converters can be used to convert and isolate the most common standard analogue signals; each model is designed for a single input output signal function, and they are the right solution in applications where many modules handling the same signal are used, where they allow a large cost reducion compared with multi function modules. These modules are provided with 3 ways galvanic isolation between input output and supply voltage. If a single signal must provide several output channels it s possible to use many modules connecting their inputs in parallel as long as the signal is voltage, or in series when the signal is current.

CWBK 7-0802 Cat. No. X766802 CWBK 7-0803 Cat. No. X766803

CWBK 7-0804 Cat. No. X766804

# **Analogue signal converters**

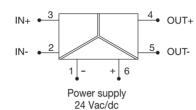
- 1.5 kV, 3 ways, IN/OUT/supply voltage isolation
- Fixed value
- Compact dimension, 6.2 mm pitch





#### NOTES The dimensions includes the DIN clamp. (1) range 16.8...30 Vdc / 19.2...28.8 Vac

(1) range 16.8...30 Vdc / 19.2...28.8 Vac (2) 3-way isolation: IN/OUT/power supply



VERSIONS	Cat. No. X756536	Cat. No. X756537	Cat. No. X756538
IN: 420 mA / OUT: 010 V	CWAA 7-0536		
IN: 420 mA / OUT: 020 mA		CWAA 7-0537	
IN: 420 mA / OUT: 420 mA			CWAA 7-0538
INPUT TECHNICAL DATA			
Input signal	420 mA	420 mA	420 mA
Input resistance	100 Ω	100 Ω	100 Ω
OUTPUT TECHNICAL DATA			
Output signal	010 V	020 mA	420 mA
Applicable load	>1 kΩ	<400 Ω	<400 Ω
GENERAL TECHNICAL DATA			
Supply voltage	24 Vac/dc (1)	24 Vac/dc (1)	24 Vac/dc (1)
Rated current	$\leq$ 13 mA $\pm$ 10%	≤ 13 mA ± 10%	$\leq$ 13 mA $\pm$ 10%
Accuracy	0.1% @ 23°C FS	0.1% @ 23°C FS	0.1% @ 23°C FS
Trasmission frequency	< 30 Hz	< 30 Hz	< 30 Hz
Temperature coefficient	0.02% / K FS	0.02% / K FS	0.02% / K FS
Isolation	1.5 kVac / 60 s (2)	1.5 kVac / 60 s (2)	1.5 kVac / 60 s (2)
ECM standards	EN 61000-6-2, EN 61000-6-4	EN 61000-6-2, EN 61000-6-4	EN 61000-6-2, EN 61000-6-4
Reference Standard	IEC 664-1, DIN VDE	IEC 664-1, DIN VDE	IEC 664-1, DIN VDE
Overvoltage category/Pollution degree	III / 2	Ⅲ/2	Ⅲ/2
Protection degree	IP 20 IEC 529, EN60529	IP 20 IEC 529, EN60529	IP 20 IEC 529, EN60529
Operating temperature range	-25+60°C	-25+60°C	-25+60°C
Connection terminal	2.5 mm <sup>2</sup> fixed screw type	2.5 mm <sup>2</sup> fixed screw type	2.5 mm <sup>2</sup> fixed screw type
Housing material	PPE	PPE	PPE
Approx. weight	40 g (1.41 oz)	40 g (1.41 oz)	40 g (1.41 oz)
Mounting information	vertical on rail adjacent without gap	vertical on rail adjacent without gap	vertical on rail adjacent without gap
MOUNTING ACCESSORIES		 	 
Mounting rail type according to IEC60715/TH35-7.5	PR/3/A	AC, PR/3/AC/ZB, PR/3/AS, PR/3	S/AS/ZB
Mounting rail type according to IEC60715/G32	1100/1		

Mounting rail type according to IEC60715/TH35-7.5	
Mounting rail type according to IEC60715/G32	
Plug-in jumper	red
(16 poles, 16 A)	white
	blue

 CWBK 7-0802
 Cat. No. X766802

 CWBK 7-0803
 Cat. No. X766803

 CWBK 7-0804
 Cat. No. X766804

• OUT+

**BLOCK DIAGRAM** 

#### **APPLICATIONS**

nese converters can be used convert and isolate the most mmon standard analog signals; ach model is designed for a ngle input output signal function, nd they are the right solution in pplications where many modules andling the same signal are sed, where they allow a large ost reduction compared with multi nction modules. These modules re provided with 3 ways galvanic olation between input output nd supply voltage. If a single ignal must provide several output annels it is possible to use many odules connecting their inputs in arallel as long as the signal is oltage, or in series when the signal current

## **Programmable analogue** signal converters

- 3 ways galvanic isolation
- 14 programmable input range
- 3 programmable output range
- Simple programming

• Available version with 24-240 Vac/dc supply voltage



NOTES		BLOCK DIAGRAM	
The dimensions includes the DIN clamp. (1) Adjustable via rotary-switch (2) Adjustable via dip-switch (3) range 16.830 Vdc / 19.228.8 Vac (4) range 16.8264 Vdc / 19.2264 Vac (5) 3-way isolation: IN/OUT/power supply	IN+ 0 U,I U,I U,I U,I 5 OUT+ 5 OUT- 7 8 Power supply 24 Vac/dc	HIN+ 0 U,I IN- 0 7 8 Power supply 24240 Vac/dc	
VERSIONS	Cat. No. X756516	Cat. No. X756517	APP
24 Vac/de supply voltage	CWUAA 6-0516		

VENDING	000 100 10	000 100 1100011	ALLEVAL
24 Vac/dc supply voltage	CWUAA 6-0516		Multifunction conver
24-240 Vac/dc supply voltage		CWUAA 6-0517	used to convert an
			most common stand
INPUT TECHNICAL DATA			signals; the input of
Input signal (1)	060 / 0100 / 0300 / 0500 mV 01 / 010 / 020 / 220 V 05 / 010 / 020 / 420 / ±5 / ±20 mA	060 / 0100 / 0300 / 0500 mV 01 / 010 / 020 / 220 V 05 / 010 / 020 / 420 / ±5 / ±20 mA	can be set up into 14 and the output can b 3 most important and
Input resistance	330 kΩ with input voltage 100 Ω with input current	330 k $\Omega$ with input voltage 100 $\Omega$ with input current	The set up is pose ply switching the pose switch on the side of
<b>OUTPUT TECHNICAL DATA</b>			The many different i
Output signal (2)	010 V 020 / 420 mA	010 V 020 / 420 mA	combinations offered ctions modules allow inventory for both new
Applicable load	$>1 \ k\Omega$ with output voltage <400 $\Omega$ with output current	$>1 \text{ k}\Omega$ with output voltage <400 $\Omega$ with output current	ment products and p signal conversion solu
<b>GENERAL TECHNICAL DATA</b>			The "3 ways" galva assures total isolat
Supply voltage	24 Vac/dc (3)	24-240 Vac/dc (4)	input, output and
Rated current	≤ 35 mA ± 10% @ 24 Vdc	≤ 35 mA ± 10% @ 24 Vdc	this feature, and the
Accuracy	0.1% @ 23°C FS	0.1% @ 23°C FS	ting signal circuitry"
Trasmission frequency	< 30 Hz	< 30 Hz	lent accuracy withou
Temperature coefficient	0.02% / K FS	0.02% / K FS	adjustment.
Isolation	1.5 kVac / 60 s (5)	4 kVac / 60 s (5)	If a single signal must
ECM standards	EN 50081-2, EN 50082-2	EN 50081-2, EN 50082-2	ral output channels it
Reference Standard	IEC 664-1, DIN VDE	IEC 664-1, DIN VDE	use many modules co
Overvoltage category/Pollution degree	III / 2	III / 2	inputs in parallel as
Protection degree	IP 20 IEC 529, EN60529	IP 20 IEC 529, EN60529	signal is voltage, or i
Operating temperature range	-25+60°C	-25+60°C	signal is current.
Connection terminal	2.5 mm <sup>2</sup> fixed screw type	2.5 mm <sup>2</sup> fixed screw type	
Housing material	Noryl UL94V-0	Noryl UL94V-0	
Approx. weight	65 g (2.29 oz)	75 g (2.65 oz)	
Mounting information	vertical on rail adjacent without gap	vertical on rail adjacent without gap	
MOUNTING ACCESSORIES			
Mounting rail type according to IEC60715/TH35-7.5	PR/3/AC, PR/3/AC/ZB	, PR/3/AS, PR/3/AS/ZB	
Mounting rail type according to IEC60715/G32	-		

MOUNTING ACCESSORIES		
Mounting rail type according to IEC60715/TH35-7.5		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail type according to IEC60715/G32		—
Plug-in jumper	red	—
(16 poles, 16 A)	white	_
	blue	—

### PLICATIONS

erters can be nd isolate the dard analogue the modules signal ranges e set for up to alogue ranges. sible by simsition of a dip the module. input / output by multifunws to reduce w and replaceprovides many utions.

anic isolation tion between supply input; "self calibra-", gives excel-ut any manual

provide seveis possible to onnecting their s long as the in series when

82