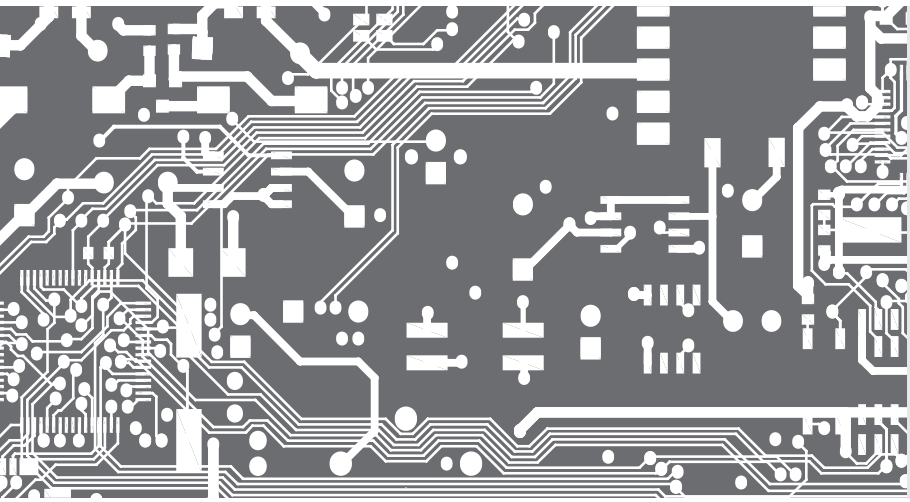


CATALOGUE **PLC**

PROGRAMMABLE CONTROLLERS

orbit merret

CATALOGUE **PLC**

PROGRAMMABLE CONTROLLERS

WHY DO WE MAKE A PLC?

Recently we could see a clear trend towards adding measuring properties to what used to be simple logic controllers. That is why we decided to introduce a programmable logic controller in fusion with our measuring instruments. That is how the OMC 8000 series came into existence. It can be used for process control both with and without measuring. As a strong partner for the software side of the project we chose a renowned German company KW Software. Visualisation is part of our process control.

OVERVIEW OF OMC 8000

For our PLC OMC 8000 range we selected module architecture. At the heart of the system there is the main module which can be accompanied by up to 31 expansion modules. These can be both nearby, or at a distance. The maximum distance is up to 40 m while the maximum data flow is still maintained. Communication is realised using the CAN interface. It needs to be remembered that the higher the number of expansion modules, the higher the demands on the communication line there will be.

The main module can be powered by 230 V or 24 V. It contains three digital inputs, which react to the power supply voltage. It also comes with six versatile inputs, all of which are electrically isolated (sharing a common ground terminal amongst them), from outputs and power supply. These can process the following signals:

- pulse up to 30 V
- pulse - contact, NPN open collector
- analogue, voltage up to 30 V
- analogue, current up to 20 mA
- analogue, Pt 1000, Ni 1000, Pt 100 (only two inputs)

Versatile inputs can also be used as two full quadrature inputs for the use with quadrature encoders where two input signals come with a 90° phase shift + zeroing pulse. One pair can be used as RS485 for communication with external devices such as numerical or text displays, operator panel etc.

Output selection is between 5 relays with switching contact 250 V/10 A each or five open connectors NPN, 30 V/0,3 A.

OMC 8000 comes equipped with ETHERNET 100Base interface for network communication. Via this interface the PLC can be connected with other PLCs operator panels HMI or superior systems such as SCADA. OMC 8000 can also be used as a datalogger. MicroSD card is used for data storage.

Expansion modules increase the possibilities of the main module by adding inputs and outputs, precise and ultra precise measuring inputs, analogue outputs and communication modules. Part of OMC8000 series are also power supplies for Power Bus and sensors. Expansion modules are made in two widths: 36 mm with maximum number of connector terminals of 18 and 72 mm with maximum number of connector terminals 39. Modules are either powered by an iter-module line or by their own power supply unit.

PROGRAMMING OMC 8000

Programming of the PLC is fully in line with EN 61131-3 standard , which specifies syntax and semantics of unified file of programming languages including general software module and structuring language. These programming languages are available for creating user programs:

IL - instruction list
ST - structured text
LD - ladder diagram
FBD - function block diagram
SFC - sequential function chart

DIAGRAM OMC 8000

HMI

OMD 202RS

OM 602RS

RS 485

HMI PLC PC SERVER

INTERNET

Ethernet

3X DIGITAL INPUT

6X UNIVERSAL INPUT

0 - 3/10/30 V
0/4 - 20 mA
Pt 100 (2x)
Pt 1000, Ni 1000
PNP/NPN /contact
IRC (2x)

RS 485

MAIN MODULE

Internal CAN bus with Power supply for modules, max. length of 40 m

MICRO SDCARD

OMC 8000

L1 L2 L3 L4 L5

5X DIGITAL OUTPUT

OMC 8100
PS

OMC 8000
PS30

POWER SUPPLY MODULE

OMC 8000
GSM

GSM MODULE

OMC 8100
2RS

OMC 8100
CAN

OMC 8100
PROFI

DATA MODULES

DIGITAL INPUTS	
15DI	15x digital inputs
36DI	36x digital inputs

OMC 8100
15DI

OMC 8000
36DI

DIGITAL OUTPUTS	
8DI	8x digital inputs
9DOC	9x open collectors
10DOR	10x relays
10DORC	5x open collectors + 5x relays
10DOC	10x open collectors

OMC 8100
9DOC

OMC 8000
8DI.10DOR

OMC 8000
8DI.10DORC

OMC 8000
8DI.10DOC

ANALOGUE OUTPUTS	
8DI	8x digital inputs
AO	1x analogue output, 0/4...20 mA, 0...2/5/10 V, ±10 V
2AO	2x analogue outputs, 0/4...20 mA, 0...2/5/10 V, ±10 V

OMC 8100
AO

OMC 8000
8DI.2AO

UNIVERSAL ANALOGUE INPUTS/DI/RTD/TC	
8UNIA	8x universal analogue inputs, type A
6RTD	6x inputs for Pt 100/500/1000, Ni 1000/10000
6TC	6x inputs for Thermocouples J/K/T/E/B/S/R/N/L
4DU	4x analogue inputs for linear potentiometer
2UNIC	2x precise universal analogue input, type C
4DC	4x ultra precise analogue DC input, ±100 mV...±300 V/±300 mA...±5 A
4PM	4x ultra precise analogue PM inputs, 0/4...20 mA, ±2/±5/±10
4DU	4x ultra precise analogue inputs for linear potentiometer

OMC 8110
8UNIA

OMC 8110
6RTD

OMC 8110
6TC

OMC 8110
4DU

OMC 8120
2UNIC

OMC 8130
4DC

OMC 8130
4PM

OMC 8130
4DU

UNIVERSAL ANALOGUE INPUTS/OUTPUTS/DI	
8DI	8x digital inputs
2UNIC	2x precise universal analogue inputs, type C
5DOR	5x relays
5DOC	5x open collectors
2AO	2x analogue outputs, 0/4...20 mA, 0...2/5/10 V, ±10 V

OMC 8020
8DI.2UNIC

OMC 8020
8DI.2UNIC.5DOR

OMC 8020
8DI.2UNIC.5DOC

OMC 8020
8DI.2UNIC.2AO

INPUTS FOR TENZOMETRY/OUTPUTS/DI	
8DI	8x digital inputs
2T	2x ultra precise analogue inputs for load cell
5DOR	5x relays
5DOC	5x open collectors
2AO	2x analogue outputs, 0/4...20 mA, 0...2/5/10 V, ±10 V

OMC 8030
8DI.2T

OMC 8030
8DI.2T.5DOR

OMC 8030
8DI.2T.5DOOC

OMC 8030
8DI.2T.2AO

1/3 PHASE VERSATILE WATT METER, AC METER	
PWR	1 phase measurement
3PWR	3 phase measurement

OMC 8100
PWR

OMC 8000
3PWR

OMC 8000

- 3x DIGITAL INPUTS
- 6x UNIVERSAL ANALOGUE INPUTS
- 5x RELAYS
- ETHERNET, RS 485
- DIMENSIONS 72 X 90 MM
- POWER SUPPLY 80...230 V AC/DC OR 24 V AC/DC
- FULLY COMPATIBLE WITH EN 61131-3

MAIN MODULE

OMC 8000 is the main module of the PLC system.

DESCRIPTION

For our PLC OMC 8000 range we chose module architecture. At the heart of the system there is the main module which can be accompanied by up to 31 expansion modules. These can be both nearby, or at a distance. The maximum distance is up to 40 m while the maximum data flow is still maintained. Communication is realised using the CAN interface. It needs to be remembered that the higher the number of expansion modules, the higher the demands on the communication line there will be.

The main module can be powered by 230 V or 24 V. It contains three digital inputs, which react to the power supply voltage. It also comes with six versatile inputs, all of which are electrically isolated (sharing a common ground terminal amongst them), from outputs and power supply. These can process the following signals:

- pulse up to 30 V
- pulse - contact, NPN open collector
- analogue, voltage up to 30 V
- analogue, current up to 20 mA
- analogue, Pt1 000, Ni 1000, Pt 100 (only two inputs)

Versatile inputs can also be used as two full quadrature inputs for the use with quadrature encoders where two input signals come with a 90° phase shift + zeroing pulse. One pair can be used as RS485 for communication with external devices such as numerical or text displays, simple operator panel etc.

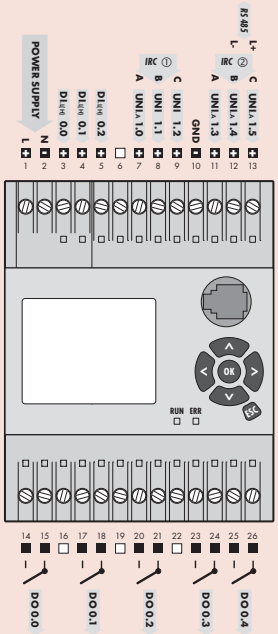
ADVANTAGES OF OMC 8000

- module architecture with the possibility of connecting up to 31 modules
- colour TFT display privides inforamtion about the state of the entire system
- ETHERNET 100Base
- data recording onto a microSD kard with a selectable time stamp for a later analysis (to monitor trends, states of I/O, alarms, etc ...)
- versatility of inputs (digital, analogue, frequency, data)
- two inputs for IRC encoders (1 MHz) or six inputs PNP/NPN/contact (100 kHz)
- five relay or OC outputs
- micro SD card
- online editing which enables debugging
- web server
- programming according to EN 61131-3

	OMC 8000 - x1	**OMC 8000 - x2**
OUTPUTS		
Number	5	5
Type	transistor (OC)	relays
Function	ON/OFF, PWM (10 kHz)	ON/OFF
Max switchable current	300 mA	10 A
Max switchable voltage	30 V	250 VAC/24 VDC
Max switchable power	9 W	2500 VA/240W
Response time	< 0,15 ms	8 ms
LED signalisation of output state	yes	yes

	OMC 8000 - x1	OMC 8000 - x2
INPUTS - ANALOGUE		
Number of inputs	6	6
Type	analogue – universal/digital	analogue – universal/digital
Measuring range	0...3/10/30 V 0/4...20 mA Pt 100 (2x) Pt 1 000/Ni 1 000 PNP/NPN/contact (100 kHz) IRC (1 MHz), (2x)	0...3/10/30 V 0/4...20 mA Pt 100 (2x) Pt 1 000/Ni 1 000 PNP/NPN/contact (100 kHz) IRC (1 MHz), (2x)
Resolution	12 bits	12 bits
Overload capacity	10x	10x
Accuracy	0,2 % of range	0,2 % of range
Rate	500 meas./s	500 meas./s
LED signalisation of output state	yes	yes
INPUTS - DIGITAL		
Number of inputs	3	3
Measuring range (for Power supply 24 V AC/DC)	12...30 V AC/DC	12...30 V AC/DC
Measuring range (for Power supply 80...250 V AC/DC)	80...250 V AC/DC	80...250 V AC/DC
Max. current	2,5 mA	2,5 mA
Response time	20 ms	20 ms
LED signalisation of input state	yes	yes
FUNCTION		
Computing power	0,1 µs, 12 µs (WORD), 18 µs (floating decimal point)	
Projection	colour TFT display	
Communication	ETHERNET 100Base, RS 485	
Internal komunication via bus	CANBUS at 1 Mbit/s over 40 m	
RTC	electrical circuit for time control and data recording	
microSDcard	max 35 GB	
SPECIFICATIONS		
Module width	72 mm	72 mm
Maximum consumption	5 VA	5 VA
Power supply	24 V AC/DC 80...250 V AC/DC	24 V AC/DC 80...250 V AC/DC
Working temperature	-20°...60°C	
Cover	IP 40	
Dielectric strength	4 kVAC for the duration of 1 minute between the data Bus and output 2,5 kVAC for the duration of 1 minute between data Bus and input	
Insulation resistance	for pollution degree II, measuring cat. III., 300 V (ZI), 150 (DI)	
Electric safety	EN 61010-1, A2	
EMC	EN 61326-1	
Programming	EN 61131-3	

CONNECTION



ORDER CODE

OMC 8000 - ☐☐

Power supply	24 V AC/DC, isolated	**0**	
	80...250 V AC/DC, isolated	**1**	
OUTPUTS	5x open collector		**1**
	5x relays		**2**

- 15x/36x DIGITAL INPUTS
- LED SIGNALISATION OF INPUT STATE
- POWER SUPPLY VIA LINE

DIGITAL INPUTS

OMC 8100 - 15DI 15-channel digital input

OMC 8000 - 36DI 36-channel digital input

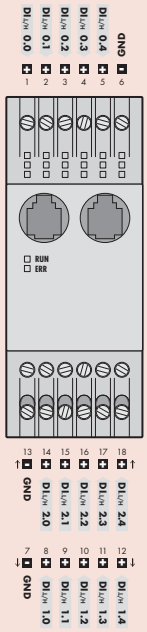
EXPANSION MODULE

OMC 8100 - 15DI
OMC 8000 - 36DI

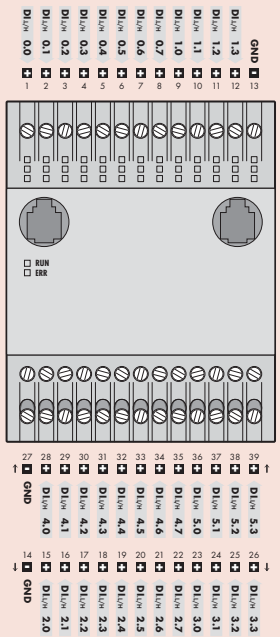
	OMC 8100 - 15DI	OMC 8000 - 36DI
INPUTS		
Number of inputs	15	36
Measuring range	12...250 V AC/DC	12...250 V AC/DC
Max. current	2,5 mA	2,5 mA
Response time	20 ms	20 ms
LED signalisation of input state	yes	yes
SPECIFICATIONS		
Module width	36 mm	72 mm
Maximum power consumption	50 mA	100 mA
Power supply	for buses	for buses
Working temperature	-20°...60°C	-20°...60°C
Cover	IP 40	IP 40
Dielectric strength	2,5 kVAC for the duration of 1 minute between data Bus and output	
Insulation resistance	for pollution degree II, measuring cat. III., 300 V (ZI), 150 (DI)	
Electric safety	EN 61010-1, A2	
EMC	EN 61326-1	

CONNECTION

OMC 8100 - 15DI



OMC 8000 - 36DI



ORDER CODE

OMC 8100 - 15DI

OMC 8000 - 36DI

DIGITAL OUTPUTS COMBINED

OMC 8100 - 9DOC is a fast 9-channel digital input with open collectors.

OMC 8000 - 8DI.10DOC is a fast 10-channel digital output with open collectors plus 8 universal digital inputs.

OMC 8000 - 8DI.10DOCR is a 10-channel digital output with 5 open collectors and 5 relays plus 8 universal digital inputs.

OMC 8000 - 8DI.10DOR is a 10-channel digital relay output plus 8 universal digital inputs.

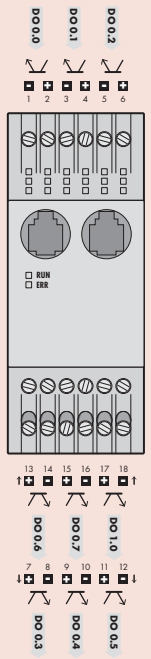
- 8x DIGITAL INPUTS
- 9x/10x DIGITAL OUTPUTS
- LED SIGNALISATION OF INPUT AND OUTPUT STATE
- POWER SUPPLY VIA LINE (8100)
- POWER SUPPLY 24 V AC/DC OR 80...230 V AC/DC (8000)

EXPANSION MODULES
OMC 8100 - 9DOC
OMC 8000 - 8DI.10DOC
OMC 8000 - 8DI.10DOCR
OMC 8000 - 8DI.10DOR

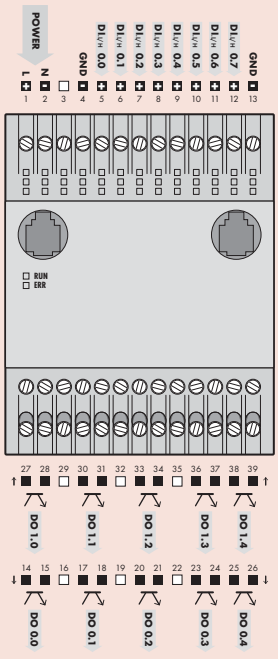
	OMC 8100 - 9DOC	OMC 8000 - 8DI.10DOC	OMC 8000 - 8DI.10DOCR	OMC 8000 - 8DI.10DOR
OUTPUTS				
Number	9	10	5+5	10
Type	transistor (OC)	transistor (OC)	transistor (OC) • relays	relays
Function	ON/OFF, PWM (100 kHz)	ON/OFF, PWM (100 kHz)	ON/OFF, PWM (100 kHz)	ON/OFF
Maximum switchable current	300 mA	300 mA	300 mA • 10 A	10 A
Maximum switchable voltage	30 V	30 V	30 V • 250 VAC/24 VDC	250 VAC/24 VDC
Maximum switchable power	9 W	9 W	9 W • 2500 VA/240W	2500 VA/240W
Response time	< 0,15 ms	< 0,15 ms	< 0,15 ms • 8 ms	8 ms
LED signalisation of output state	yes	yes	yes	yes
INPUTS				
Number of inputs	–	8	8	8
Measuring range		12...250 V AC/DC	12...250 V AC/DC	12...250 V AC/DC
Max. proud		2,5 mA	2,5 mA	2,5 mA
Response time		20 ms	20 ms	20 ms
LED signalisation of input state		yes	yes	yes
SPECIFICATIONS				
Module width	36 mm	72 mm	72 mm	72 mm
Maximum consumption	150 mA	5 VA	5 VA	5 VA
Power supply	Powered by the Bus	24 V AC/DC 80...250 V AC/DC	24 V AC/DC 80...250 V AC/DC	24 V AC/DC 80...250 V AC/DC
Working temperature	-20°...60°C			
Cover	IP 40			
Dielectric strength	2,5 kVAC for the duration of 1 minute between supply and output			
Insulation resistance	for pollution degree II, measuring cat. III., 300 V (ZI), 150 (DI)			
Electric safety	EN 61010-1, A2			
EMC	EN 61326-1			

CONNECTION

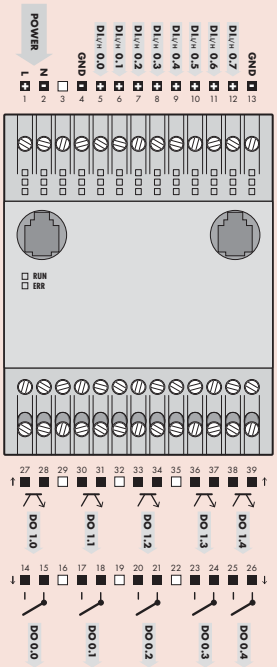
OMC 8100 - 9DOC



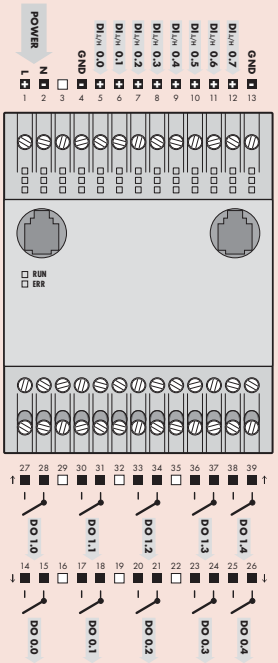
OMC 8000 - 8DI.10DOC



OMC 8000 - 8DI.10DOCR



OMC 8000 - 8DI.10DOR



ORDER CODE

OMC 8100 - 9DOC

OMC 8000 - 8DI.10DOC -

Power supply	24 V AC/DC, isolated	**0**
	80...250 V AC/DC, isolated	**1**

OMC 8000 - 8DI.10DOCR -

Power supply	24 V AC/DC, isolated	**0**
	80...250 V AC/DC, isolated	**1**

OMC 8000 - 8DI.10DOR -

Power supply	24 V AC/DC, isolated	**0**
	80...250 V AC/DC, isolated	**1**

- 5x/8x DIGITAL INPUTS
- 1x/2x ANALOGUE OUTPUTS
- LED SIGNALISATION OF INPUT AND OUTPUT STATE
- BROKEN CURRENT LOOP DETECTION
- POWER SUPPLY VIA LINE (8100)
- POWER SUPPLY 24 V AC/DC OR 80...230 V AC/DC (8000)

ANALOGUE OUTPUTS

OMC 8100 - 5DI.AO is a universal analogue output plus 5 universal digital inputs.

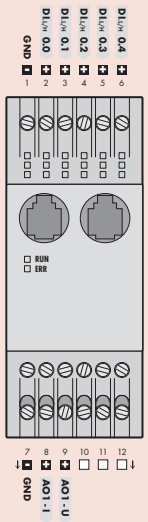
OMC 8000 - 8DI.2AO is a universal 2-channel analogue output plus 8 universal digital inputs.

EXPANSION MODULES
OMC 8100 - 5DI.AO
OMC 8000 - 8DI.2AO

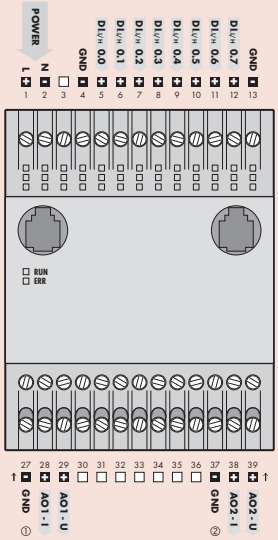
	OMC 8100 - 5DI.AO	OMC 8000 - 8DI.2AO - x1	OMC 8000 - 8DI.2AO - x2
OUTPUTS			
Number	1	1	2
Type	analogue - universal	analogue - universal	analogue - universal
Measuring range	0...2/5/10/±10 V 0...5 mA, 0/4...20 mA	0...2/5/10/±10 V 0...5 mA, 0/4...20 mA	0...2/5/10/±10 V 0...5 mA, 0/4...20 mA
Resolution	16 bits	16 bits	16 bits
Compensation of leads resistance	< 500 Ω	< 500 Ω	< 500 Ω
Temperature coeficient	15 ppm/°C	15 ppm/°C	15 ppm/°C
Accuracy	0,1 % of range	0,1 % of range	0,1 % of range
Response time	< 1 ms	< 1 ms	< 1 ms
LED signalisation of outputs state, broken current loop detection	yes	yes	yes
INPUTS			
Number of inputs	5	8	8
Measuring range	12...250 V AC/DC	12...250 V AC/DC	12...250 V AC/DC
Max. current	2,5 mA	2,5 mA	2,5 mA
Response time	20 ms	20 ms	20 ms
LED signalisation of inputs state	yes	yes	yes
SPECIFICATIONS			
Module width	36 mm	72 mm	72 mm
Maximum consumption	300 mA	5 VA	5 VA
Power supply	Powered by the Bus	24 V AC/DC 80...250 V AC/DC	24 V AC/DC 80...250 V AC/DC
Working temperature	-20°...60°C		
Cover	IP 40		
Dielectric strength	4 kVAC for the duration of 1 minute between supply and input/output 2,5 kVAC for the duration of 1 minute between Bus and input/output		
Insulation resistance	for pollution degree II, measuring cat. III., 300 V (ZI), 150 (DI)		
Electric safety	EN 61010-1, A2		
EMC	EN 61326-1		

CONNECTION

OMC 8100 - 5DI.AO



OMC 8000 - 8DI.2AO



ORDER CODE

OMC 8100 - 5DI.AO

OMC 8000 - 8DI.2AO - ☐☐

Power supply	24 V AC/DC, isolated	**0**	
	80...250 V AC/DC, isolated	**1**	
Analogue output	1 output		**1**
	2 outputs		**2**

- 8x FAST UNIVERSAL ANALOGUE INPUTS
- 4x/6x ANALOGUE INPUTS Pt, T/C, DU
- 2x PRECISE UNIVERSAL ANALOGUE INPUTS
- 4x ULTRA PRECISE ANALOGUE INPUTS
- LED SIGNALISATION OF INPUT STATE
- POWER SUPPLY VIA LINE

ANALOGUE INPUTS

OMC 8110 - 8UNIA is a fast 8-channel universal analogue input.

OMC 8110 - 6RTD is a fast 6-channel analogue input for sensors Pt/Ni/Cu.

OMC 8110 - 6TC is a fast 6-channel analogue input for thermo couples including Reference Junction Compensation.

OMC 8110 - 4DU is a fast 4-channel analogue input for linear potentiometers.

OMC 8120 - 2UNIC is a precise 2-channel universal analogue input.

OMC 8130 - 4DC is a ultra precise 4-channel analogue input for DC voltage and current.

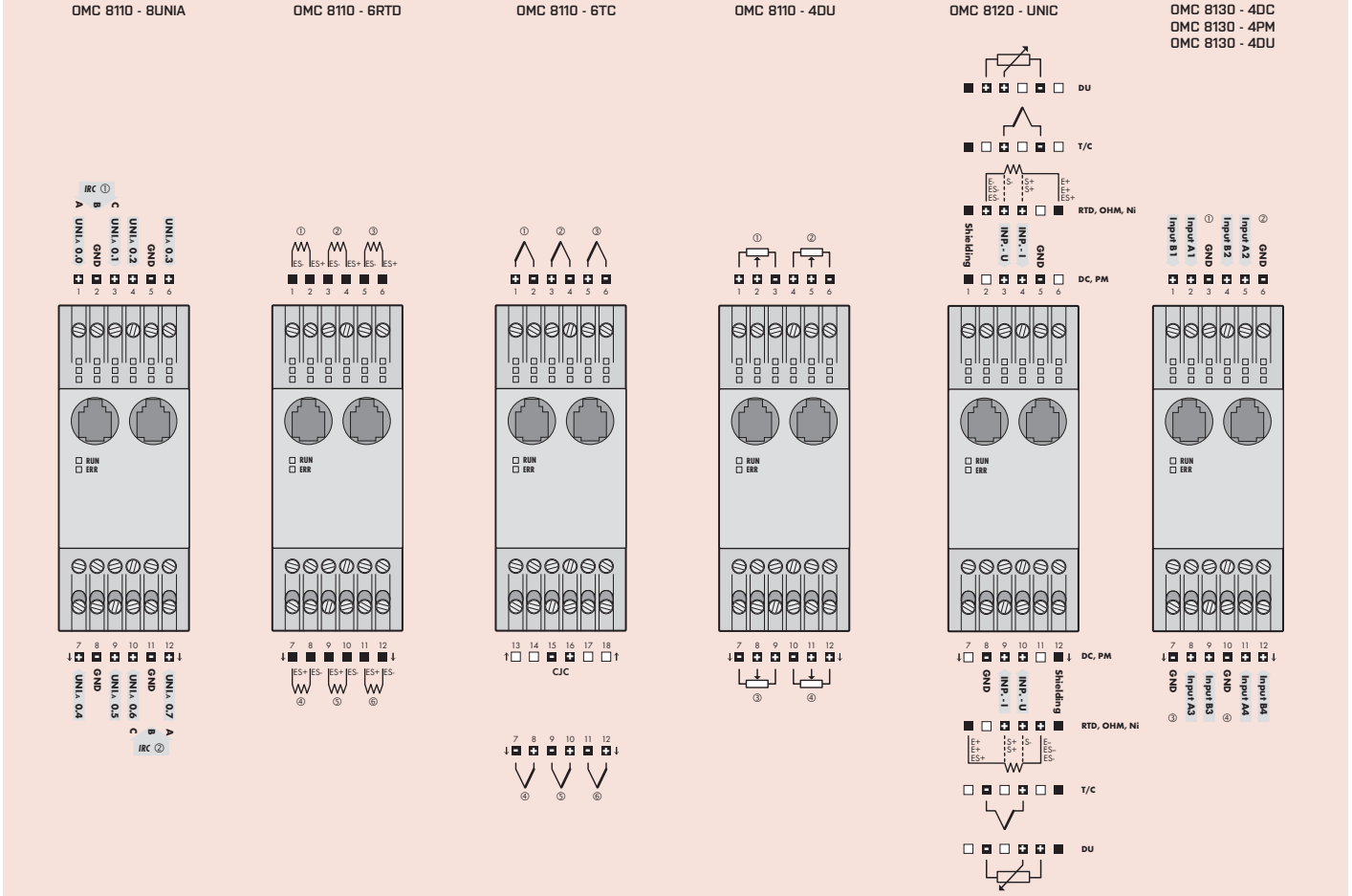
OMC 8130 - 4PM is a ultra precise 4-channel analogue input for process-monitor signals up to 20 mA and ±10 V.

OMC 8130 - 4DU is a ultra precise 4-channel analogue input for linear potentiometers.

EXPANSION MODULES
OMC 8110 - 8UNIA
OMC 8110 - 6RTD
OMC 8110 - 6TC
OMC 8110 - 4DU
OMC 8120 - 2UNIC
OMC 8130 - 4DC
OMC 8130 - 4PM
OMC 8130 - 4DU

	OMC 8110 - 8UNIA	OMC 8110 - 6RTD	OMC 8110 - 6TC	OMC 8110 - 4DU	OMC 8120 - 2UNIC	OMC 8130 - 4DC	OMC 8130 - 4PM	OMC 8130 - 4DU
INPUTS								
Number of inputs	8	6	6	4	2	4	4	4
Type	analogue, universal	analogue	analogue	analogue	analogue, ultra precise universal	analogue, ultra precise	analogue, ultra precise	analogue, ultra precise
Isolated inputs	no	no	no	no	yes	yes	yes	yes
Measuring range	0...3/10/30 V 0/4...20 mA Pt 1 000/Ni 1 000 PNP/NPN/kontakt (< 100 kHz) IRC (< 1 MHz)	Pt 100/500/1 000 Ni 1 000 Cu 50/100	J/K/T/E/B/S/R/N/L	lin. potentiometer < 500 Ω	±60/±150/±300 /1200 mV 0...5 mA/0/4...20 mA ±2/±5/±10/±40 V 0...0,1/1/10/100 kΩ Pt 50/100/500/1 000 Cu 50/100 Ni 1 000/10 000 J/K/T/E/B/S/R/N/L Lin. pot. (< 500 Ω)	±1 mA/±10 mA ±300 mA/±1 A ±100 mV/±1 V ±10 V/±100 V ±5 A/±300 V	0...5 mA 0/4...20 mA ±2/±5/±10 V	lin. potentiometer < 500 Ω
Resolution	12 bits	12 bits	12 bits	12 bits	24 bits	24 bits	24 bits	24 bits
Overload capacity	10x	10x	10x	10x	10x	10x (no 5 A/300 V)	10x	10x
Reference junction compensation	–	–	yes	–	yes	–	–	–
Accuracy	0,2 % of range	0,2 % of range	0,2 % of range	0,2 % of range	0,1 % of range	0,02 % of range	0,02 % of range	0,02 % of range
Rate	500 meas./s	500 meas./s	500 meas./s	500 meas./s	40 meas./s	100 meas./s	100 meas./s	100 meas./s
LED signalisation of input state	yes	yes	yes	yes	yes	yes	yes	yes
SPECIFICATIONS								
Module width	36 mm							
Maximum power consumption	150 mA							
Power supply	Powered by the Bus							
Working temperature	-20°...60°C							
Cover	IP 40							
Dielectric strength	2,5 kVAC after 1 min between Bus and inputs							
Insulation resistance	for pollution degree II, measuring cat. III., 300 V (ZI), 150 (DI)							
Electric safety	EN 61010-1, A2							
EMC	EN 61326-1							

CONNECTION



ORDER CODE

OMC 8110 - 8UNIA -

Number of inputs	4 inputs [1 - 4]	**4**
	8 inputs [1 - 8]	**8**

OMC 8110 - 6RTD -

Number of inputs	3 inputs [1 - 3]	**3**
	6 inputs [1 - 6]	**6**

OMC 8110 - 6TC -

Number of inputs	3 inputs [1 - 3]	**3**
	6 inputs [1 - 6]	**6**

OMC 8110 - 4DU -

Number of inputs	3 inputs [1 - 3]	**3**
	6 inputs [1 - 6]	**6**

OMC 8120 - 2UNIC -

Number of inputs	1 input [1]	**1**
	2 inputs [1 - 2]	**2**

OMC 8130 - 4DC -

Number of inputs	1 input [1]	**1**	•			
	2 inputs [1 - 2]	**2**	•	•		
	3 inputs [1 - 3]	**3**	•	•	•	
	4 inputs [1 - 4]	**4**	•	•	•	•
Measuring range	±1 mA [A], ±10 mA [B]		**A**	**A**	**A**	**A**
	±300 mA [A], ±1 A [B]		**B**	**B**	**B**	**B**
	±100 mV [A], ±1 V [B]		**C**	**C**	**C**	**C**
	±10 V [A], ±100 V [B]		**D**	**D**	**D**	**D**
	±5 A [A], ±300 V [B]		**E**	**E**	**E**	**E**
	on request		**Z**	**Z**	**Z**	**Z**

OMC 8130 - 4PM -

Number of inputs	1 input [1]	**1**
	2 inputs [1 - 2]	**2**
	3 inputs [1 - 3]	**3**
	4 inputs [1 - 4]	**4**

OMC 8130 - 4DU -

Number of inputs	1 input [1]	**1**
	2 inputs [1 - 2]	**2**
	3 inputs [1 - 3]	**3**
	4 inputs [1 - 4]	**4**

ANALOGUE INPUTS COMBINED

OMC 8020 - 8DI.2UNIC is a precise 2-channel analogue input plus 8 universal digital inputs.

OMC 8020 - 8DI.2UNIC.5DOC is a precise universal 2-channel analogue input plus 8 universal digital inputs and 5 outputs with open collector.

OMC 8020 - 8DI.2UNIC.5DOR is a precise universal 2-channel analogue input plus 8 universal digital inputs and 5 relay outputs.

OMC 8020 - 8DI.2UNIC.2AO is a precise universal 2-channel analogue input plus 8 universal digital inputs and 2 universal analogue outputs.

- 8x DIGITAL INPUTS
- 2x PRECISE UNIVERSAL ANALOGUE INPUTS
- 5x DIGITAL OUTPUTS - RELAYS, OC, PWM
- 2x UNIVERSAL ANALOGUE OUTPUTS
- LED SIGNALISATION OF INPUT STATE
- POWER SUPPLY 24 V AC/DC OR 80...230 V AC/DC

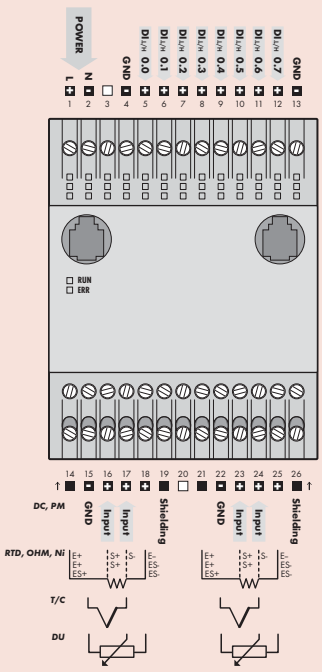
EXPANSION MODULES
OMC 8020 - 8DI.2UNIC
OMC 8020 - 8DI.2UNIC.5DOC
OMC 8020 - 8DI.2UNIC.5DOR
OMC 8020 - 8DI.2UNIC.2AO

	OMC 8020 - 8DI.2UNIC	OMC 8020 - 8DI.2UNIC.5DOC	OMC 8020 - 8DI.2UNIC.5DOR	OMC 8020 - 8DI.2UNIC.2AO
OUTPUTS				
Number	–	5	5	2
Type	–	transistor (OC)	relays	analogue
Function	–	ON/OFF, PWM (100 kHz)	ON/OFF	0...2/5/10/±10 V 0...5 mA, 0/4...20 mA
Maximum switching current	–	300 mA	10 A	–
Maximum switching voltage	–	30 V	250 VAC/24 VDC	–
Maximum switching power	–	9 W	2500 VA/240W	–
Accuracy	–	–	–	0,1% of range
Response time	–	< 0,15 ms	< 0,15 ms • 8 ms	< 1 ms
LED signalisation of output state, broken loop detection	–	yes	yes	yes
INPUTS - ANALOGUE				
Number of inputs	2	2	2	2
Type	analogue – universal	analogue – universal	analogue – universal	analogue – universal
Isolated inputs	yes	yes	yes	yes
Measuring range	±60/±150/±300/1200 mV 0...5 mA/0/4...20 mA/ ±2/±5/±10/±40 V 0...0,1/1/10 /100 kΩ Pt 50/100/500/1 000 Cu 50/100 Ni 1 000/10 000 J/K/T/E/B/S/R/N/L Lin. potentiom. (min. 500 Ω)	±60/±150/±300/1200 mV 0...5 mA/0/4...20 mA/ ±2/±5/±10/±40 V 0...0,1/1/10 /100 kΩ Pt 50/100/500/1 000 Cu 50/100 Ni 1 000/10 000 J/K/T/E/B/S/R/N/L Lin. potentiom. (min. 500 Ω)	±60/±150/±300/1200 mV 0...5 mA/0/4...20 mA/ ±2/±5/±10/±40 V 0...0,1/1/10 /100 kΩ Pt 50/100/500/1 000 Cu 50/100 Ni 1 000/10 000 J/K/T/E/B/S/R/N/L Lin. potentiom. (min. 500 Ω)	±60/±150/±300/1200 mV 0...5 mA/0/4...20 mA/ ±2/±5/±10/±40 V 0...0,1/1/10 /100 kΩ Pt 50/100/500/1 000 Cu 50/100 Ni 1 000/10 000 J/K/T/E/B/S/R/N/L Lin. potentiom. (min. 500 Ω)
Resolution	24 bits	24 bits	24 bits	24 bits
Overload capacity	10x	10x	10x	10x
Reference junction compensation	yes	yes	yes	yes
Accuracy	0,1 % of range	0,1 % of range	0,1 % of range	0,1 % of range
Rate	40 meas./s	40 meas./s	40 meas./s	40 meas./s
LED signalisation of input state	yes	yes	yes	yes
INPUTS -- DIGITAL				
Number of inputs	8	8	8	8
Measuring range	12...250 V AC/DC	12...250 V AC/DC	12...250 V AC/DC	12...250 V AC/DC
Max. current	2,5 mA	2,5 mA	2,5 mA	2,5 mA
Response time	20 ms	20 ms	20 ms	20 ms
LED signalisation of input state	yes	yes	yes	yes

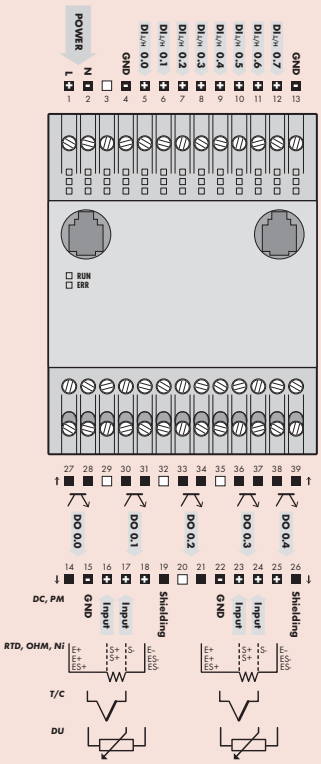
	OMC 8020 - 8DI.2UNIC	OMC 8020 - 8DI.2UNIC.5DOC	OMC 8020 - 8DI.2UNIC.5DOR	OMC 8020 - 8DI.2UNIC.2AO
SPECIFICATIONS				
Module width	72 mm	72 mm	72 mm	72 mm
Maximum consumption	5 VA	5 VA	5 VA	5 VA
Power supply	24 V AC/DC 80...250 V AC/DC	24 V AC/DC 80...250 V AC/DC	24 V AC/DC 80...250 V AC/DC	24 V AC/DC 80...250 V AC/DC
Working temperature	-20°...60°C			
Cover	IP 40			
Dielectric strength	4 kVAC for the duration of 1 minute between supply and output			
Insulation resistance	for pollution degree II, measuring cat. III., 300 V (ZI), 150 (DI)			
Electric safety	EN 61010-1, A2			
EMC	EN 61326-1			

CONNECTION

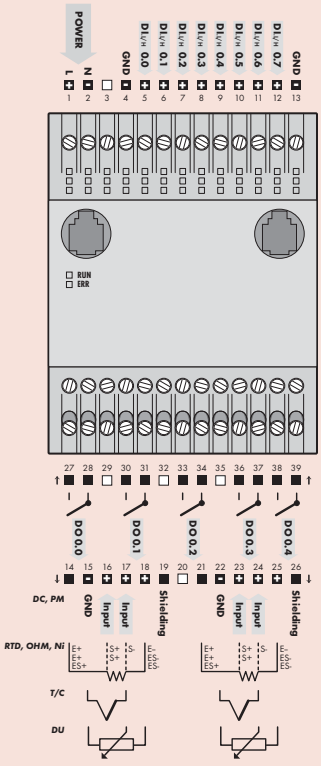
OMC 8020 - 8DI.2UNIC



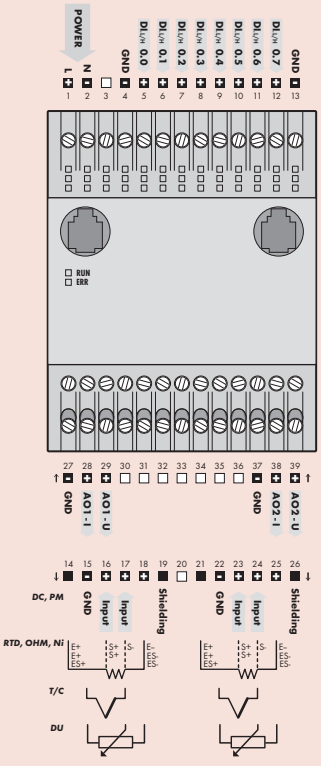
OMC 8020 - 8DI.2UNIC.5DOC



OMC 8020 - 8DI.2UNIC.5DOR



OMC 8020 - 8DI.2UNIC.2AO



ORDER CODE

OMC 8020 - 8DI.2UNIC -

Power supply	24 V AC/DC, isolated	**0**
	80...250 V AC/DC, isolated	**1**

OMC 8020 - 8DI.2UNIC.5DOC -

Power supply	24 V AC/DC, isolated	**0**
	80...250 V AC/DC, isolated	**1**

OMC 8020 - 8DI.2UNIC.5DOR -

Power supply	24 V AC/DC, isolated	**1**
	80...250 V AC/DC, isolated	**2**

OMC 8020 - 8DI.2UNIC.2AO - □□

Power supply	24 V AC/DC, isolated	**2**	
	80...250 V AC/DC, isolated	**4**	
Number of analogue outputs	none		**0**
	1x output		**1**
	2x output		**2**

ANALOGUE INPUTS
LOAD CELL

OMC 8030 - 8DI.2T is an ultra precise 2-channel module for load plus 8 universal digital inputs.

OMC 8030 - 8DI.2T.5DOC is an ultra precise 2-channel module for load plus 8 universal digital inputs and 5 outputs with open collector.

OMC 8030 - 8DI.2T.5DOR is an ultra precise 2-channel module for load plus 8 universal digital inputs and five relay outputs.

OMC 8030 - 8DI.2T.2AO is an ultra precise 2-channel module for load plus 8 universal digital inputs and 2 universal analogue outputs.

- 8x DIGITAL INPUTS
- 2x ANALOGUE INPUTS FOR LOAD CELL
- 5x DIGITAL OUTPUTS - RELAYS, OC, PWM
- 2X UNIVERSAL ANALOGUE OUTPUTS
- LED SIGNALISATION OF INPUT STATE
- POWER SUPPLY 24 V AC/DC OR 80...230 V AC/DC

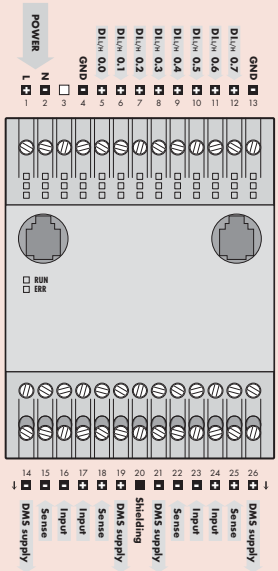
EXPANSION MODULES
OMC 8030 - 8DI.2T
OMC 8030 - 8DI.2T.5DOC
OMC 8030 - 8DI.2T.5DOR
OMC 8030 - 8DI.2T.2AO

	OMC 8030 - 8DI.2T	OMC 8030 - 8DI.2T.5DOC	OMC 8030 - 8DI.2T.5DOR	OMC 8030 - 8DI.2T.2AO
OUTPUTS				
Number	–	5	5	2
Type	–	transistor (OC)	relays	analogue
Function	–	ON/OFF, PWM (100 kHz)	ON/OFF	0...2/5/10/±10 V 0...5 mA, 0/4...20 mA
Maximum switchable current	–	300 mA	300 mA •10 A	–
Maximum switchable voltage	–	30 V	30 V • 250 VAC/24 VDC	–
Maximum switchable power	–	9 W	9 W • 2500 VA/240W	–
Accuracy	–	–	–	0,1 % of range
Response time	–	< 0,15 ms	< 0,15 ms • 8 ms	< 1 ms
LED signalisation of output state, broken loop detection	–	yes	yes	yes
INPUTS - ANALOGUE				
Number of inputs	2	2	2	2
Type	analogue	analogue	analogue	analogue
Isolated inputs	no	no	no	no
Measuring range	1...4 mV/V 2...8 mV/V 4...16 mV/V	1...4 mV/V 2...8 mV/V 4...16 mV/V	1...4 mV/V 2...8 mV/V 4...16 mV/V	1...4 mV/V 2...8 mV/V 4...16 mV/V
Resolution	24 bits	24 bits	2...8 mV/V	24 bits
Overload capacity	10x	10x	4...16 mV/V	10x
Connection	6-wire	6-wire	6-wire	6-wire
Accuracy	0,05 % of range	0,05 % of range	0,05 % of range	0,05 % of range
Rate	40 meas./s	40 meas./s	40 meas./s	40 meas./s
LED signalisation of input state	yes	yes	yes	yes
INPUTS - DIGITAL				
Number of inputs	8	8	8	8
Measuring range	12...250 V AC/DC	12...250 V AC/DC	12...250 V AC/DC	12...250 V AC/DC
Max. current	2,5 mA	2,5 mA	2,5 mA	2,5 mA
Response time	20 ms	20 ms	20 ms	20 ms
LED signalisation of input state	yes	yes	yes	yes

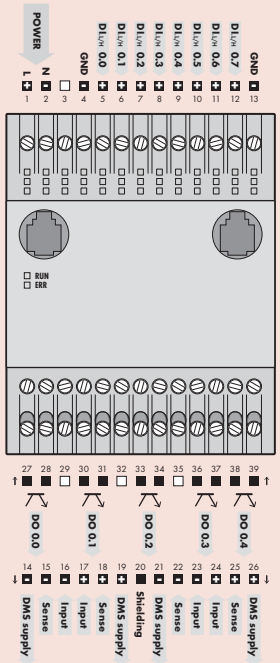
	OMC 8030 - 8DI.2T	OMC 8030 - 8DI.2T.5DOC	OMC 8030 - 8DI.2T.5DOR	OMC 8030 - 8DI.2T.2AO
SPECIFICATIONS				
Module width	72 mm	72 mm	72 mm	72 mm
Maximum consumption	5 VA	5 VA	5 VA	5 VA
Power supply	24 V AC/DC 80...250 V AC/DC	24 V AC/DC 80...250 V AC/DC	24 V AC/DC 80...250 V AC/DC	24 V AC/DC 80...250 V AC/DC
Working temperature	-20°...60°C			
Cover	IP 40			
Dielectric strength	4 kVAC for the duration of 1 minute between between supply and output			
Insulation resistance	for pollution degree II, measuring cat. III., 300 V (ZI), 150 (DI)			
Electric safety	EN 61010-1, A2			
EMC	EN 61326-1			

CONNECTION

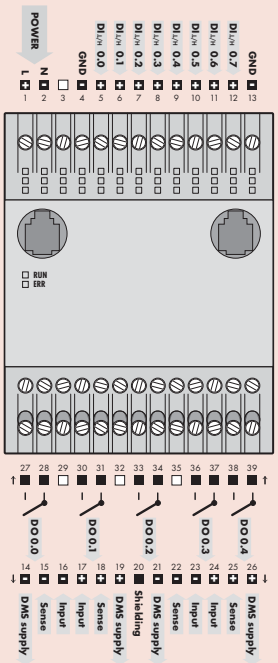
OMC 8000 - 8DI.2T



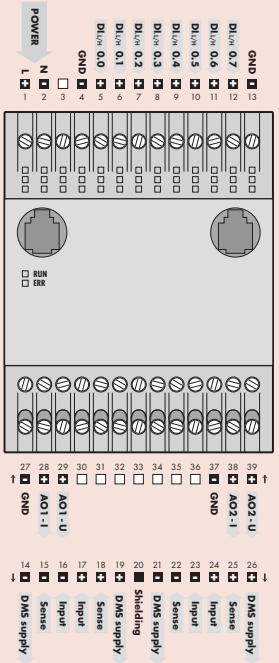
OMC 8000 - 8DI.2T.5DOC



OMC 8000 - 8DI.2T.5DOR



OMC 8000 - 8DI.2T.2AO



ORDER CODE

OMC 8030 - 8DI.2T -

Power supply	24 V AC/DC, isolated	**0**
	80...250 V AC/DC, isolated	**1**

OMC 8030 - 8DI.2T.5DOC -

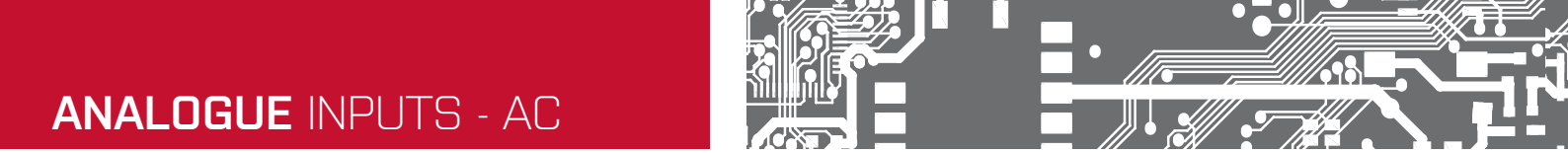
Power supply	24 V AC/DC, isolated	**0**
	80...250 V AC/DC, isolated	**1**

OMC 8030 - 8DI.2T.5DOR -

Power supply	24 V AC/DC, isolated	**0**
	80...250 V AC/DC, isolated	**1**

OMC 8030 - 8DI.2T.2AO - □□

Power supply	24 V AC/DC, isolated	**2**	
	80...250 V AC/DC, isolated	**4**	
Number of analog output	none		**0**
	1x output		**1**
	2x output		**2**



- AC CURRENT/VOLTAGE, POWER, FREQUENCY, PF
- 1-PHASE AND 3-PHASE MEASUREMENT

ANALOGUE INPUTS - AC

OMC 8100 - PWR is a module for the measurement of alternating current, voltage, power, frequency and PF.

OMC 8000 - 3PWR is a module for 3-phase measurement of alternating current, voltage, power, frequency and PF. Individual inputs are mutually isolated which allows for economical and comfortable connection into the measured circuit.

MEASURED VALUES

- voltage (VRMS)
- current (ARMS)
- active power (P)
- frequency (Hz)

with calculation of

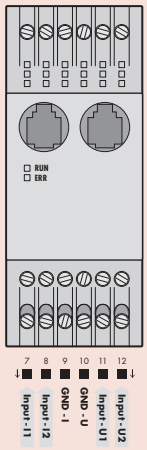
- reactive power (Q)
- apparent power (S)
- PF (cos φ)

EXPANSION MODULES
OMC 8100 - PWR
OMC 8000 - 3PWR

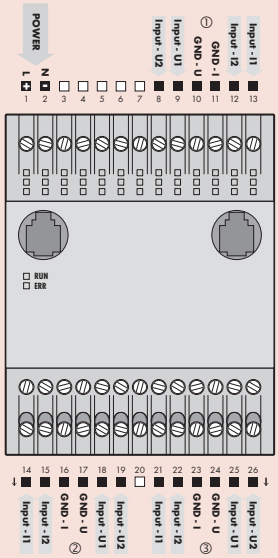
	OMC 8100 - PWR	OMC 8000 - 3PWR
INPUTS		
Number of inputs	1	3
Type	analogue	analogue
Measuring range - U	0...10 V Input U1 0...120 V Input U2 0...250 V Input U1 0...450 V Input U2	0...10 V Input U1 0...120 V Input U2 0...250 V Input U1 0...450 V Input U2
Measuring range - I	0...60 mV Input I1 0...150 mV Input I1 0...1 A Input I2 0...5 A Input I2	0...60 mV Input I1 0...150 mV Input I1 0...1 A Input I2 0...5 A Input I2
Frequency range	0...400 Hz (up to amplitude of 8 V)	0...400 Hz (up to amplitude of 8 V)
Number of phases	1	3
Mesuring	Voltage (V_{RMS}), Current (A_{RMS}), Active power (P), Frequency (Hz), Idle power (Q), Apparent power (S), PF (cos φ)	
Rozlišení	24 bits	24 bits
Overload capacity	2x	2x
Accuracy	0,3 % of range, (Q, S cos φ - 1 %)	0,3 % of range, (Q, S cos φ - 1 %)
Rate	10 meas./s	10 meas./s
LED signalisation of input state	yes	yes
SPECIFICATIONS		
Module width	36 mm	72 mm
Maximum consumption	150 mA	5 VA
Power supply	Powered by the Bus	24 V AC/DC 80...250 V AC/DC
Working temperature	-20°...60°C	
Cover	IP 40	
Dielectric strength	4 kVAC for the duration of 1 minute between between supply and output	
Insulation resistance	for pollution degree II, measuring cat. III., 300 V (ZI), 150 (DI)	
Electric safety	EN 61010-1, A2	
EMC	EN 61326-1	

CONNECTION

OMC 8100 - PWR



OMC 8000 - 3PWR



ORDER CODE

OMC 8100 - PWR -

Measuring range - U	0...10 V/120 V	**S**	
	0...250 V/450 V	**U**	
	on request	**Z**	
Measuring range - U	0...30/150 mV		**K**
	0...1/5 A		**P**
	on request		**Z**

OMC 8000 - 3PWR -

Power supply	24 V AC/DC, isolated	**0**		
	80...250 V AC/DC, isolated	**1**		
Measuring range - U	0...10 V/120 V		**S**	
	0...250 V/450 V		**U**	
	on request		**Z**	
Measuring range - U	0...30/150 mV			**K**
	0...1/5 A			**P**
	on request			**Z**

- 2x DATA OUTPUTS - RS 232/485
- 1x DATA OUTPUTS - CANBUS
- 1x DATA OUTPUTS - PROFIBUS
- 1x DATA OUTPUTS - GSM

COMMUNICATION MODULES

OMC 8100 - RS is a dual communicaton module RS 232/485 with protocol ASCII/ MESBUS/MODBUS RTU.

OMC 8100 - CAN is a communicaton CANBUS module with the possibility of expansion by double RS 232/485 with protocol ASCII/MESBUS/MODBUS RTU.

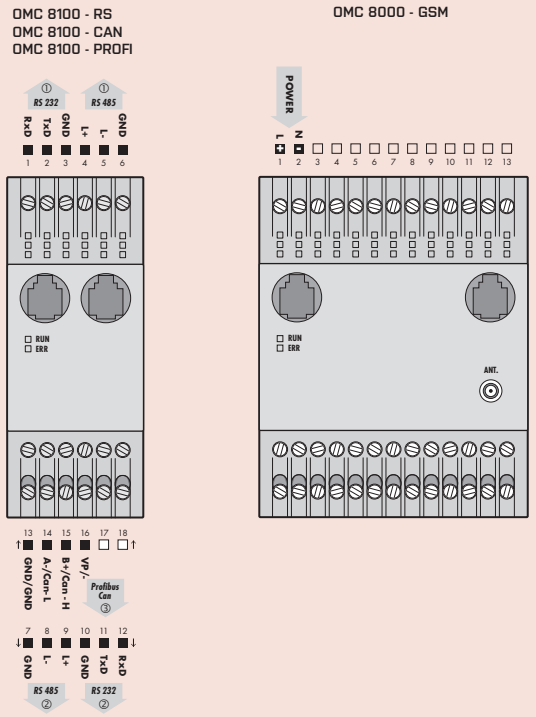
OMC 8100 - PROFI is a communicaton module PROFIBUS DP with the possibility of expansion by double RS 232/485 with protocol ASCII/MESBUS/MODBUS RTU.

OMC 8000 - GSM is a communicaton module which uses the GSM network to transfer data. It can be used for monitoring and remote process control using SMS, dial up data Internet connection or GPRS. It is possible to connect up to 255 main modules to one OMC 8000 - GSM module.

EXPANSION MODULES
OMC 8100 - RS
OMC 8100 - CAN
OMC 8100 - PROFI
OMC 8000 - GSM

	OMC 8100 - RS	OMC 8100 - CAN	OMC 8100 - PROFI	OMC 8000 - GSM
OUTPUTS				
Number	2	1 (3)	1 (3)	1
Type	RS 232/485	CANBUS	PROFIBUS DP	GSM
Data format	8 bit + no parity + 1 stop bit (ASCII) 7 bit + even parity + 1 stop bit (MESB)			
Protocol	ASCII, MESSBUS, MODBUS RTU			
Rate	600...115 200 Baud		9,6 kBaud...12 MBaud	
Address	0...31	?	0...125	
LED signalisation of output state	yes	yes	yes	yes
SPECIFICATIONS				
Module width	36 mm	36 mm	36 mm	72 mm
Maximum power consumption	150 mA	70 mA	150 mA	5 VA
Power supply	Powered by the Bus	Powered by the Bus	Powered by the Bus	24 V AC/DC 80...250 V AC/DC
Working temperature	-20°...60°C			
Cover	IP 40			
Dielectric strength	4 kVAC for the duration of 1 minute between between supply and output			
Insulation resistance	for pollution degree II, measuring cat. III., 300 V (ZI), 150 (DI)			
Electric safety	EN 61010-1, A2			
EMC	EN 61326-1			

CONNECTION



ORDER CODE

OMC 8100 - RS -

OUTPUTS RS 232/485	1x	**1**
	2x	**2**

OMC 8100 - CAN -

OUTPUTS RS 232/485	no	**0**
	1x	**1**
	2x	**2**

OMC 8100 - PROFI -

OUTPUTS RS 232/485	no	**0**
	1x	**1**
	2x	**2**

OMC 8000 - GSM -

Power supply	24 V AC/DC, isolated	**0**
	80...250 V AC/DC, isolated	**1**

POWER SUPPLY MODULES

OMC 8100 - PS is a module used for auxiliary power supply Buses. Its use is necessary each time when the total power draw of expansion modules powered by the Bus exceeds the capacity of the main OMC 8000 module. The power required by the expansion modules and the possible need to use the Power supply is evaluated when designing the PLC system in v MULTIPROGU and also in real life the main unit continually monitors the power being delivered and it informs the user accordingly.

OMC 8000 - PS30 is designed for Power supply Buses just like the OMC 8100 - PS, but in addition it has an output for Power supply external peripherals. The module has a 24 V output with the total current of 1 A connected to 6 pairs of terminals.

- ADDITIONAL POWER SUPPLY FOR MODULES ON THE BUS
- POWER SUPPLY FOR SENSORS

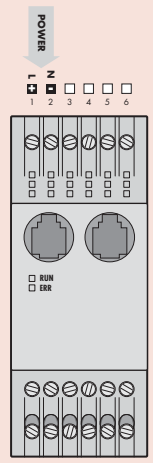
EXPANSION MODULES

OMC 8100 - PS
OMC 8000 - PS30

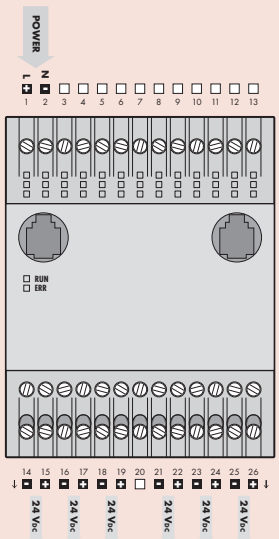
	OMC 8100 - PS	OMC 8000 - PS30
OUTPUTS		
Number	1	2
Type	Power Bus	Power Bus and sensors
Output	5 V/1 A - Bus	5 V/1 A - Bus, isolated 24 V/1 A
Efficiency	min. 78 %	min. 78 %
Tolerance	±0,25 V	±0,25 V
Ripple	< 50 mV_{ss}	< 50 mV_{ss}
Outage span	> 200 ms	> 200 ms
LED signalisation of output state/current restriction	yes	yes
SPECIFICATIONS		
Module width	36 mm	72 mm
Maximum power consumption	5 VA	35 VA
Power supply	24 V AC/DC 80...250 V AC/DC	80...250 V AC/DC
Working temperature	-20°...60°C	
Cover	IP 40	
Dielectric strength	4 kVAC for the duration of 1 minute between between supply and output	
Insulation resistance	for pollution degree II, measuring cat. III., 300 V (ZI), 150 (DI)	
Electric safety	EN 61010-1, A2	
EMC	EN 61326-1	

CONNECTION

OMC 8000 - PS



OMC 8000 - PS30

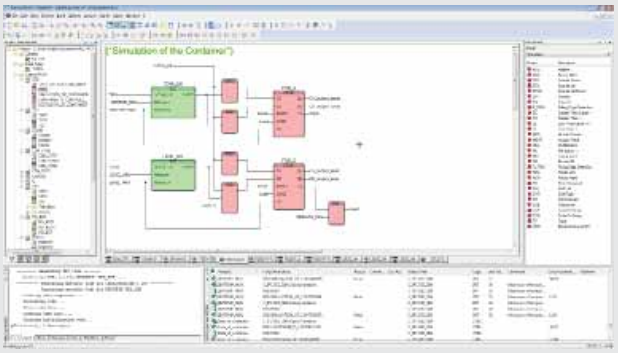


ORDER CODE

OMC 8100 - PS

		- ☐
Power supply	24 V AC/DC, isolated	**0**
	80...250 V AC/DC, isolated	**1**

OMC 8000 - PS30



- PROJECT HANDLING
- CREATION OF THE CONTROL APPLICATION
- PARAMETERIZATION AND CONFIGURATION OF THE CONTROL
- CODE GENERATION
- TEST, COMMISSIONING AND SERVICE
- DOCUMENTATION
- ARCHIVING

MULTIPROG®
MODERN AND POWERFUL SYSTEM FOR PROGRAMMING IEC 61131

MULTIPROG Express is a less complex version of the well known IEC 61131 programming system MULTIPROG. This slight and easy-to-use programming tool mainly focuses on less complex PLC application programming and addresses also to "IEC beginners".

To satisfy these demands, MULTIPROG Express has got an even more convenient user interface and passes on some expert features.

Nevertheless, MULTIPROG Express still provides a wide range of proven functionality for a comfortable project creation, fast application development as well as easy downloading, monitoring and commissioning of the PLC program.

Additionally, MULTIPROG Express provides some more intelligent automatisms such as the insertion of program instances within tasks or an easy to use variable handling.

MULTIPROG Express is suited in an optimal way to the IEC 61131 PLC runtime system ProConOS embedded CLR which is the new, open and unified .NET-based runtime for embedded targets.

To simplify the project handling, the hardware structure has been limited (again for clarity and plainness reasons): one configuration, one resource and five tasks are allowed per project.

MULTIPROG Express runs on Microsoft Windows® XP, Windows® Vista platforms as well as on Windows® 7.

MULTIPROG EXPRES

The IEC 61131 programming system includes the programming languages Instruction List (IL), Structured Text (ST), Ladder Diagram (LD), Function Block Diagram (FBD), Sequential Function Chart (SFC) as well as:

- A project manager including library management
- Project Wizard and Edit Wizard
- The modern Ladder Editor that facilitates the development of graphical LD/FBD code
- Text editor with syntax highlighting and IntelliSense
- Grid-based variables editor for easy and error-preventing declaration of variables and FB instances
- Cross references window available in edit and debug mode
- Code compilation that is optimized to only compile the changed parts of the project
- Integrated PLC simulation with expanded simulation mode
- Debug and commissioning functions such as the logic analyzer, breakpoints, address debug, single step mode, overwriting and forcing of variables and recipes
- A watch window with continuous instance information A detailed, context-sensitive help system User interface languages in English, German, Czech, Chinese and Japanese

SYSTEM SPECIFICATION

PC SYSTEM	
Processor	Min. Pentium II 500
RAM	Win XP: 256 MB
	Win 7/Win Vista: 500 MB
Hard disk memory	Min. 500 MByte free
Communication	TCP/IP and/or RS 232
Operating systems	Win XPSP 3, Win Vista SP2 and Win 7 (32 bit) Internet Explorer > 5.0, required
DATA TYPES	
Bit stream	BOOL (1/8), BYTE (8), WORD (16), DWORD (32)
Numeric	SINT (8), INT (16), DINT (32), USINT (8), UINT (16), UDINT (32), REAL (32), time (TIME), array (ARRAY), structures (STRUCT) and string
SYSTEM LIMITS	
Nodes in the project tree	8000
Configurations/resources in the project tree	1/1
Program instances per resources	15
Tasks per resources[1]	5
Program instances per task	15
Global variable/local variables per POU	5000/1500
Included libraries	32
POUs on the project (incl. POUs of libraries)	256
Number of I/O supported per project	128 Kbytes
I/O groups	200

[1] Only periodic and default tasks

PROVISIT 2,4
MASCHINE VISUALIZATION

ProVisIT is the easy and compact machine visualization with powerful features.

Easy applications can be designed very quickly within a few minutes using standard objects. For more complex applications Visual Basic Script allows to transfer the knowledge of your machine or plant into intelligent objects.

ProVisIT is a low cost alternative to large HMI packages and an alternative to own Visual Basic programming. Since ProVisIT supports both Windows® NT/2000/XP/Vista and Windows® CE, it gives the possibility to choose the needed hardware power for an HMI panel. ProVisIT projects are even 1:1 compatible between Windows® NT/2000/XP/Vista and Windows® CE.

In conjunction with the IEC 61131 programming system MULTIPROG and the IEC 61131 runtime system ProConOS, a complete and integrated automation system is available. Due to the support of OPC, ProVisIT can be integrated into existing systems easily, with or without MULTIPROG and ProConOS.

The user interface of ProVisIT is available in English, German, French, Czech and Simplified Chinese language. Due to Unicode support Chinese characters can also be used for texts inside the projects.

PROVISIT 2,4 DEVELOPMENT (EXPRESS)

The development system consists of a free graphical editor and a full-featured text editor for designing your applications as well as a runtime environment for testing and simulating your applications.

Further features are
- Easy reuse due to object instances and library functions
- Integrating own application knowledge by the means of VBScript and ActiveX Controls
- Extensive alarm and recipe handling
- Easy management and hierarchical filing of graphics and scripts by the means of a project tree
- A free graphical editor supporting e.g. drag & drop, grouping and aligning objects, undo/redo and zooming
- Large number of standard objects. Easy assignment of one or several dynamizations to objects
- Extensive dynamizations of objects, such as: Size, position, rotation, color changes and actions, e.g. defining user shortcuts, jumps to visualization pages, setting variable values, executing scripts and much more...
- International usage due to online language switching
- User defined libraries
- Password protection for projects and libraries
- Cross references
- Browsing of variables and objects via OPC which makes it unnecessary to enter data several times
- Presetting the screen size and other default settings
- Runtime operation without mouse when working at the machine
- Object related, user defined HTML help
- Supported interface standards DA 1.0A and 2.04, certified by OPC Foundation

The development version is available for Windows® NT 4.0, Windows® 2000 Windows® XP and Windows® Vista.

PROVISIT 2,4 RUNTIME

The runtime version can be executed standalone or can be integrated into other applications as an ActiveX Control, e.g. into the Internet Explorer as HTML page.

The runtime version is available for Windows® NT 4.0, Windows® 2000, Windows® XP, Windows Vista® a Windows® CE 5.0 and NET.

SYSTEM SPECIFICATION

PC/CE SYSTEM	DESKTOP PC	CE DEVICE
Processor	Min. Pentium II 350	StrongARM, Pentium II
RAM	Min. 64 MB	Min. 16 MB
Hard disk memory	Min. 200 MB free	Min. 3 MB free
Communication	OPC DA 1.0a and DA 2.04	
Operating systems	Windows® NT4.0 (> SP 5) Windows® 2000 SP 2 Windows® XP Windows® Vista	Windows® CE 3.0/4.x/5.0 Windows® XP Windows® Vista
SYSTEM LIMITS[1]		
Visualization screens ProVisIT Standard (Visualization screens ProVisIT Express*)		200 (50*)
Included user libraries		30
Standard objects (lines, curves, polylines, rectangles, ellipses, polygons, images, texts)		1000 (each per screen)
Advanced objects (list-, combo-, edit boxes, radio buttons, check boxes, buttons output windows, ActiveX controls)		100 (each per screen)
Alarm items		1000
Recipe items		1000 (per recipe)
Global variables ProVisIT Standard (Global variables ProVisIT Express*)		500 (150*)
OPC items ProVisIT Standard (OPC items ProVisIT Express*)		1000 (500*)
Number of scripts (formulas, converters, limiters))		200
PERFORMACE DATA[2]		
Desktopí PC: AMD 1,3 GHz, Win 2000		10 ms
ARM CE device: StrongARM 1110 206 MHz, Win CE3.0		40 ms
Intel CE device: Pentium II 350 MHz, Win CE 3.0		20 ms

[1] The given values are minimal approximate values. Dependent on the system and system performance, higher values are possible
[2] Minimum screen update rate: Screen with 150 objects, 25 are cyclic changed and updated via ProConOS® OPC-Server

GENERAL
BUSINESS TERMS

1. Basic provisions

1.1. The General business, service and guarantee terms arrange the relations for the delivery of goods and services, hereinafter referred to as "the Subject of performance" by ORBIT MERRET, spol. s r.o., (hereinafter referred to as "the Supplier") to Customers and are binding upon all and any business relations.

1.2. By signing the legally binding acts leading to the establishment of a Supplier-customer relationship of obligatory character, related to the delivery of the Subject of performance by the Supplier, the parties accept that their mutually binding relationship shall be governed in terms of the provisions of Section 262, par. 1 of the Commercial code by regime of the quoted law. Establishment of the arranged binding relationship is always conditioned by the Supplier's acceptance of the Customer's order form.

2. Price of the Subject of performance

2.1. Catalogues and pricelists issued by the Supplier as well as oral and telephone information about the price of the Subject of performance are of informative character, not binding for the Supplier and not claimable by the Customer. The Supplier reserves the right to modify technical parameters, or as the case may be, also the prices of the Subject of performance without prior written notice. The Supplier is not responsible for errors generated during the print of the business and technical materials.

2.2. For specification of the price, the Customer is entitled to request a binding quotation (hereinafter referred to as "the Quotation"), which is valid for a period of 21 calendar days from the date of issue unless provided otherwise.

2.3. Prices of the Subject of performance listed in the Quotation do not include any related services, unless expressly provided for otherwise. Requirement for the provision of related services needs to be stated in the order.

2.4. The Supplier assumes a standard use of the Subject of performance. Any specific requirements for the Subject of performance need to be expressed in the order.

3. Concluding the contract

3.1. Individual business deals are concluded on the basis of written orders from the Customer, sent either by mail or fax, exceptionally also on the basis of oral or telephone order.

3.2. An order has to contain the following elementary properties:
- business name and seat of the Customer including telephone and facsimile contact numbers
- name of the person authorized to act on behalf of the Customer, Trade Licence No. and Tax identification No. (if the Customer is registered as VAT payer);
- explicit specification of the Subject of performance as per technical background materials of ORBIT MERRET, spol. s r.o., quantity, delivery terms (place and deadline),
if pertinent, further specific requirements for the Subject of performance.

3.3. After the receipt of Customer Order the Supplier sends the Customer an "Order Confirmation", which is done in writing either by fax or via e-mail. The Supplier is entitled to accept also orders delivered to him after the term of validity of the quotation expired. The Supplier is obligated to send the Order confirmation to the Customer no later than within
3 business days of the date of delivery of the order.

3.4. In case the Customer Order requires a non-standard Subject of performance or the amount exceeds 1000 $, prior to accepting the order, the Supplier may solicit a deposit in the amount agreed-upon in virtue of issued pro-forma invoice. The delivery time stated in the Order Confirmation starts running on the date the Customer pays the deposit.

3.5. In case of larger supplies of the Subject of performance or specific conditions under which the supply is to be realized, or if either of the parties requires so, the parties of the contract may enter into a special agreement on the Subject of performance with reference to the wording of these General terms.

3.6. All additional modifications or amendments to the contract (order) have to be made in writing in order to take effect.

4. Delivery terms

4.1. Supplies of the Subject of performance shall be realized according to the Supplier's capacity in the shortest possible term, usually within 2 – 21 days, in case of special products and more extensive supplies within 3 – 8 weeks.

4.2. The Supplier will meet the delivery terms provided that all financial obligations of the Customer from previously realized business deals have been settled.

4.3. The expected term of supply is stated in the Order confirmation. In singular cases the Supplier may prolong the term of supply, however, he shall notify the Customer about the fact without undue delay.

4.4. Delays in delivery terms of our subcontractors, strikes, export or import embargos, war or other events of force majeure relieve the Supplier from the obligation to deliver in term, without the Customer having the right to cancel the order or the right to claim damages (penalty).

4.5. The delivery term is considered fulfilled when the Subject of performance is delivered to the Customer in the issuing office of the Supplier (personal collection), or by appointed employee of the Supplier in the place of delivery or by handover of the Subject of performance to the first domestic carrier.

4.6. If personal collection by the Customer is arranged for, the delivery term is considered fulfilled also by notification of the Customer, that the Subject of performance is ready for dispatch.

4.7. Costs related to delivery and place of performance other than the issuance office of the Supplier shall be borne by the Customer.

4.8. If the Customer fails to take over the Subject of performance due to reasons on his part, the Customer shall bear the full costs related to repeated delivery.

4.9. If the Customer finds variance with the delivery note, difference in quantity and type of performance, apparent damage of packaging or products, he is obligated to immediately report such fact to the Supplier or the bearer of the consignment, and record it in writing on the delivery note or the delivery note of the forwarding service, however, within 2 business days from delivery at the latest. Later claims of this character will not be taken into account.

5. Orders cancelled by the Customer

5.1. In case of order cancelled after it has been confirmed based on request of the Customer, the Supplier is entitled to bill the Customer 20 % of the price of not taken products.

5.2. If the delivered Subject of performance is returned without justification after the agreed-upon term, the Supplier is entitled to charge a contractual penalty in the amount of 50% of the total price of the delivery.

5.3. If the Supplier enforces his right to compensation money or contractual penalty for unjustified return of delivery pursuant to the provisions of par. 5.2., confirmation of the order is cancelled after the set amount is paid. In case of default in payment of this amount the Supplier is entitled to enforce the sanctions pursuant to par. 6.3.

6. Terms of payment

6.1. Unless special terms of payment were arranged for, our invoices are due for payment within 14 days.

6.2. The Supplier is entitled to invoice immediately after the Subject of performance is handed over to the first public carrier, in case of personal collection after it is realized or after delivery of goods by the Supplier.

6.3. If the Customer fails to pay in due date, he is obligated to pay the Supplier a contractual penalty for delay in the amount of 0,10 % of the billed amount for each day of delay.

6.4. In case of delay in performance of the Customer's liabilities the Supplier is not obligated to perform further supplies until the debt is liquidated. In such case, the Customer is not entitled to claim penalty for late performance that ensued from given circumstances. In case of long-term default in performance of liabilities of the Customer, his confirmed orders may be excluded from the records without any compensation.

6.5. The due date is the date by which the amount has to be credited to the account of the Supplier or paid in cash at the Supplier's cash desk.

7. Ownership of the subject of performance

7.7. The right of ownership to the Subject of performance pursuant to these General terms is transferred to the Customer at the moment of payment of the full amount of the purchase price.

8. Guarantee terms

8.1. The Supplier provides a 60 months guarantee for non-defective operation of the Subject of performance, which period starts running on the date of its delivery unless provided for otherwise.

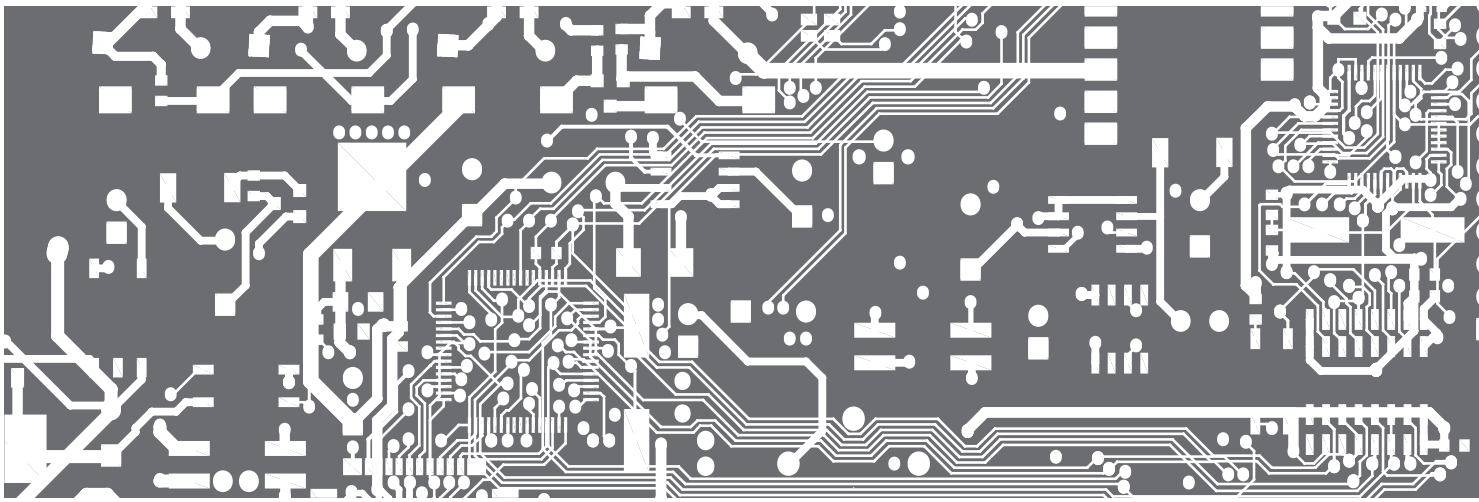
8.2. The Supplier is not responsible for damages caused by incorrect warehousing, wrong outer connexion, outside influences, in particular electric quantities of inadmissible magnitude, unprofessional assembly, wrong adjustment or attendance.

9. Other provisions

9.1. In cases when the General business terms differ from the terms set out in the submitted Customer order, the provisions contained in the order confirmation hold valid for the purpose of conclusion of the contract. Prospective modifications from the Customer have to be approved by the Supplier, otherwise par. 3.6. applies.

9.2. The mode of transportation of the Subject of performance is determined by the Supplier with maximum respect to economical aspects of the transport, unless the Customer has expressly requested otherwise.

9.3. The General business terms are governed by the provisions of the Commercial code.
Any disputes related to the application, implementation or interpretation hereof would be solved at the Commercial court in Prague.



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www.inelmatec.be

Bosnia and Hercegovina
Instruments Ltd.
www.instruments.ba

Egypt
El-Gammal Industrial Systems Co.

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MTR Automation OU
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www.adel-instrumentation.fr

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A-Tech Instruments Ltd.
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Neuron Tech

Kuwait
KCC Engineering & Contracting Co.
www.kccec.com.kw

Latvia
AXIS Industries
www.axis.lt

Hungary
Q-TECH Engineering Ltd and Co.
www.q-tech.hu

Germany
VARIOHM- EUROSENSORS Ltd.
www.variohm.com

Holland
AE Sensors B.V.
www.aesensors.nl

Poland
TR Automatyka Sp.z o.o.
www.trautomatyka.pl

Austria
GRUBER Electric Ges.m.b.H.
www.gruber-electric.at

Romania
Synchro Comp s.r.l.
www.synchro.ro

Russia
ZAO „Rospribor"
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www.techreg.sk

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ADEPT PLUS d.o.o.
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Sveden
Thermokon - Danelko
www.danelko.se

Switzerland
ORBIT CONTROLS AG
www.orbitcontrols.ch

Thailand
Lamax and Partners Co.,Ltd.
www.lamax.co.th

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Metrix Instrument Co.& PMC/Beta
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