

OVERVIEW CATALOGUE 2016

PANEL MEASURING INSTRUMENTS
BARGRAPHS
LARGE DISPLAYS
TRANSMITTERS TO DIN RAIL
PAPERLESS RECORDERS
PLC



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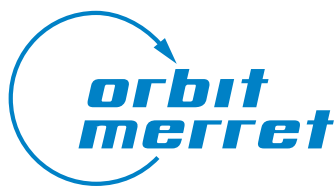
PAPERLESS RECORDERS

PLC



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Company ORBIT MERRET, s.r.o. is a genuine Czech firm, which, for more than 25 years, has been engaged in development, manufacture and sale of digital panel meters, signal transmitters, bargraphs, large displays, paperless recorders, and of a unique PLC programmable controllers system. The company results from the merger of ORBIT CONTROLS, s.r.o., and MERRET, s.r.o.

As to the staff we are a young and dynamic company based on a team of developers, representing 1/5 of the total number of employees, as well as on a manufacturing section, which employs experienced technicians. The main production processes, such as mounting parts, assembly and seasoning, take place in our own premises. It enables continual control of all operations, and consequently retention of high quality standards. Thanks to the size and independence of the company we can flexibly respond to our customers' requirements. We listen to them and get inspired by them.

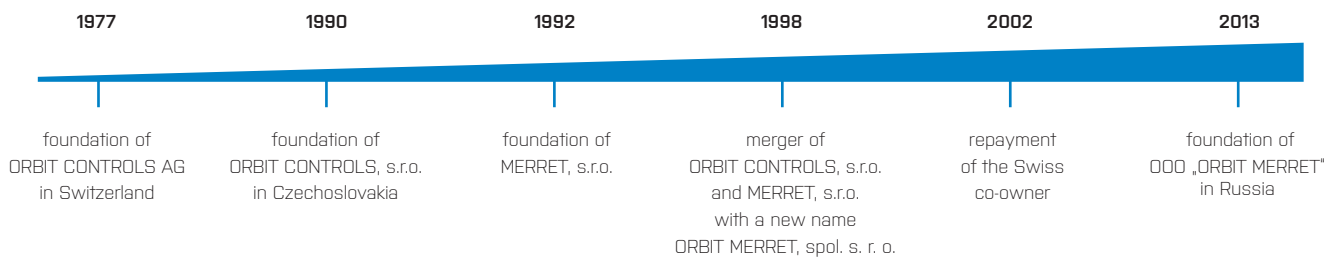
Our products do their job in many branches of industrial automation. Our heartfelt matter is nuclear energy. Some of our instruments are fully certified for this branch and they serve reliably in NPPs of five different countries.



OUR ADVANTAGES

- DEVELOPMENT AND PRODUCTION IN THE CZECH REPUBLIC
- ADJUSTMENT OF PRODUCTS ACCORDING TO CLIENT'S WISHES
- CYCLIC 48 - HOUR SEASONING OF THE INSTRUMENTS
- AUTOMATIC TESTING AND CALIBRATION DURING PRODUCTION
- MEASUREMENT PROTOCOL TO EACH PRODUCT
- 100% TRACEABILITY OF MATERIALS AND PRODUCTION PHASES
- DEVELOPMENT OF CUSTOM MADE INSTRUMENTS
- REGULAR CERTIFICATIONS
- 5 YEAR WARRANTY

HISTORY IN DATES



Within the quality systems ČSN EN ISO 9001 and ČSN EN 13485 the Company is subject to an annual audit by the Electrotechnical Testing Institute. Our calibration equipment is subject to a regular verification in the Czech Metrology Institute ČMI.

ORBIT MERRET, s.r.o. belongs to a group of companies with the highest level of credibility in CZ. Over the past decade ORBIT MERRET met the stringest criteria of credibility and reliability. It therefore belongs to a very exclusive group of Czech companies, which can use the AAA Certification as a symbol of the highest credit rating.

The expanding product assortment is followed by increasing production volumes especially for foreign markets. Currently, we export to more than 35 countries, from Australia to the USA. The increasing production volumes and our activity in the nuclear industry of Russia have led us to establishing a subsidiary in St. Petersburg.

The company is also ready to meet customer requirements for specific versions of the instruments.

Quality production, 100% traceability, testing and calibration enable us to render a 5 year warranty for all our products. Customer inquiries are responded by our technicians, who not only manufacture but also develop the instruments so that you always have the guarantee of getting the best possible answers.

To complement our product range we represent several manufacturers of linear potentiometers, sensors and flow meters.

REPRESENTING IN CZ

novotechnik
Siedle Group

Novotechnik Messwertaufnehmer OHG

German manufacturer of linear potentiometers and sensors

CONTELEC

Contelec AG

Swiss manufacturer of linear potentiometers and sensors

celesco

Celesco, MEASUREMENT SPECIALTIES, INC.

US manufacturer of wire sensors

TECFLOW
INTERNATIONAL

Tecflow International

Dutch manufacturer of flow meters



IN OUR PRODUCT RANGE THERE ARE NOW MORE THAN 70 DIFFERENT TYPES OF MEASURING INSTRUMENTS AND TRANSMITTERS

OVERVIEW OF THE OM INSTRUMENT TYPE SERIES

OMM 323	smallest instrument, size 48 x 24mm
OMM 335	smallest instrument 48 x 24mm, body ø22mm
OMM 350/650	smaller instrument, size 72 x 24mm
OML 343/643	size 96 x 48mm, depth only 30mm
OM 352/653	basic series, size 96 x 48mm
OM 402	our best selling series, size 96 x 48mm
OM 45	our last analogue instrument, size 96 x 24mm
OM 502	instrument with accuracy of 0,02%, size 96 x 48mm
OM 602	fastest counter, size 96 x 48mm
OMU 408	8-channel logger, size 96 x 48mm
OMB 402/412	bargraphs, size 96 x 48mm
OMB 451/452	bargraphs, size 160 x 80mm
OMB 200	simple bargraphs, size 72 x 24mm
OMB 300	simple bargraphs, size 96 x 24mm
OMB 500/502	simple bargraphs, size 144 x 48mm
OMD 202	large displays, sizes up to 754 x 237mm

INPUTS AND INPUT RANGES

Due to new microcontrollers and transmitters we stopped production of analogue instruments with just one measuring range. They were replaced by digital instruments, the menu of which enables an easy input range configuration. Moreover, they offer a better user comfort and more favourable prices.

But our development was moved even more forward. Practically in each type series you will now find type „UNI“ with a universal input! In the menu you can thus set not only the input range but also the input type, you are just in need of.

UNI

DC: 0...180mA, 0...80V

PM: 0/4...20mA, 0...2/5/10V

OHM: 0...30 kΩ

RTD: Pt 50/100/500/1000

Ni: Ni 1000/10 000

Cu: Cu 50/100

T/C: J/K/T/E/B/S/R/N/L

DU: Linear potentiometer (>500Ω)

Consequently, in the menu you can set more than 40 different options of input ranges and input types.

SETTINGS AND FUNCTIONS

Our instruments have three menu levels. Administrator PROFI for complete settings, service LIGHT for basic settings of the instrument functions, and user menu USER, which, if you like, enables you access to e.g. just one item. Menu access can be protected by an optional code number.

The menu of some instruments contains a relatively large number of functions and items. Each instrument has therefore a special connector for its connection to PC. Through the OM Link Programme a few mouse clicks will easily and comfortably configure your instrument. The only thing you need is an inexpensive interface adaptor OM Link-USB. The OM Link Programme for one instrument can be downloaded free of charge from our webpages.

Digital instruments offer not only the possibility of comfortable settings, but also further options of signal processing. It can be adjusted through a lot of digital filters, mathematical functions or linearization table. Values can either be only presented on the display or transferred to another type of analog signal, this time already standardized. They can also be converted into a data form in ASCII, ModBus, Messbus or Profibus protocols. It is possible to evaluate the limits and if they are achieved, to control digital outputs or measured data, and to record them internally for later analysis.

Working temperature range of our instruments from -20 °C allows their deployment even in harsh climatic conditions. For individual requirements, it is possible to extend the temperature range of some instruments up to -40°C. Verification takes place in our own climatic chamber.

OVERVIEW OF THE OM TRANSMITTER TYPE SERIES

OMX 39	single-range transmitters with isolation 3,75 kVAC
OMX 102	two-channel digital transmitters with display and galvanic isolation 2,5 kVAC
OMX 333	simple programmable digital transmitters with galvanic isolation 2,5 kVAC
OMX 380	fast digital transmitters with galvanic isolation 2,5 kVAC, and with rate of up to 7500 meas./s

DISPLAY AND LEGIBILITY

To guarantee good legibility of the measured values under different light conditions, as well as good viewing angle, all our instruments are equipped with quality LED displays with heights of 9, 14, 20, 57, 100 or 125 mm. Two smallest displays are manufactured in red or green color, the others in 3-color execution (red/green/yellow). The requested color is chosen by you in the instrument menu.

Large displays series OMD 202 can also be delivered with high bright LED (1200 mcd).



PANEL INSTRUMENTS



MODEL	OMM 323	OMM 335	OMM 350/650	OML 343/643
TYPE	microcontroller	microcontroller	microcontroller	microcontroller
DISPLAY	9999 digit height 9 mm red or green LED	9999 digit height 14 mm red or green LED	999999 digit height 14 mm red or green LED	±1999/999999 digit height 14 mm red or green LED
PROJECTION	-999...1999 Programmable	-999...3999 Programmable	-99999...999999 Programmable	±1999/-99999...999999 Programmable
MEASURING RATE	0,5...20 measur./s	0,5...20 measur./s	0,5...10 measur./s	0,5...20 measur./s
INPUT	<p>UNIVERSAL INSTRUMENT OMM 323UNI DC: ±90/±180 mA ±30/±60/±1000 mV; ±20/±40/±80 V PM: ±5 /±20/4...20 mA; ±2/±5/±10 V OHM: 0...100/300 Ω; 0...1.5/3/24 kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10 000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear potentiometer (>500 Ω)</p> <p>UNIVERSAL COUNTER OMM 323UQC NPN, PNP, on contact, <60 V <50 kHz, <20 kHz (UP/DW) counter/frequency meter/timer</p> <p>DATA DISPLAY RS 485 OMM 323RS RS 485 ASCII, Modbus-RTU</p>	<p>PASSIVE DISPLAY OMM 335PAS 4...20 mA Supply from the current loop with a loss of <6V</p> <p>PROCESS MONITOR OMM 335PM ±5 /±20/4...20 mA; ±2/±5/±10 V</p> <p>THERMOMETER FOR Pt/Ni/Cu SENSORS OMM 335RTD Pt 50/100/500/1000 Ni 1 000/10 000 Cu 50/100</p> <p>DATA DISPLAY RS 485 OMM 335RS RS 485 ASCII, Modbus-RTU</p>	<p>DC V-A METER OMM 350DC ±1/±5 A ±20/±40/±100/±200 V</p> <p>UNIVERSAL INSTRUMENT OMM 350UNI DC: ±20/±60/±1000 mV PM: 0...20/4...20 mA; 0...2/5/10 V OHM: 0...300 Ω; 0...1.5/3/30 kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10 000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear potentiometer (>500 Ω)</p> <p>UNIVERSAL COUNTER OMM 650UC NPN, PNP, on contact, <30/300 V <50 kHz, <20 kHz (UP/DW) counter/frequency meter/timer/clock</p>	<p>AC V-A METER OML 343AC 0...1/5 A; 0...60/300 mV; 0...24/50/120/250 V</p> <p>DC V-A METER OML 343DC ±1/±5 A; ±120/±240 V</p> <p>UNIVERSAL INSTRUMENT OML 343UNI DC: ±90/±180 mA ±30/±60/±1000 mV; ±20/±40/±80 V PM: ±5 /±20/4...20 mA; ±2/±5/±10 V OHM: 0...100/300 Ω; 0...1.5/3/24 kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10 000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear potentiometer (>500 Ω)</p> <p>UNIVERSAL COUNTER OML 643UQC NPN, PNP, on contact, IRC, <30 V <50 kHz, <20 kHz (UP/DW) counter/frequency meter/timer/clock</p> <p>DATA DISPLAY RS 485 OML 643RS RS 485 ASCII, Modbus-RTU</p>
FUNCTIONS	Digital filters, Rounding, Hold, Tare Linearization in 25 points	USB	Digital filters, Rounding, Hold, Tare Button lock Linearization in 25 points	Digital filters, Rounding, Hold, Tare Linearization in 25 points
COMPARATORS			*2 relays/open collectors Mode - Hysteresis	*1 relay/open collector Mode - Hysteresis
ANALOGUE OUTPUT				
DATA OUTPUT				
EXCITATION				
POWER SUPPLY	10...30 VDC/24 VAC, < 1W/1,1VA	10...30 VDC/24 VAC, < 1W/1,1VA PAS current loop supply ...20 mA	10...30 VDC/24 VAC, <2,1W/2,2 VA	10...30 VDC/24 VAC, < 1,8W/1,9 VA
FRONT DIMENSION/PANEL CUTOUT	48 x 24 mm/43,5 x 21,5 mm	48 x 24 mm/ø22 mm	72 x 24 mm/68 x 21,5 mm	96 x 48 mm/92 x 44 mm
DEPTH BEHIND THE PANEL	72 mm	55 mm	106 mm	30 mm
COVER	IP 42	IP 64	IP 42	IP 65



OM 352	OM 402	OM 45	OM 502	OM 653
microcontroller	microcontroller	analogue	microcontroller	microcontroller
±1999 nebo 9999 digit height 14 mm or 20 mm red or green LED or red/green/orange LED	999999 nebo 9999 digit height 14 mm or 20 mm red or green LED or red/green/orange LED	±19999 digit height 14 mm	999999 digit height 14 mm red or green LED	999999 nebo 9999 digit height 14 mm or 20 mm red or green LED or red/green/orange LED
±1999 nebo -999...9999 Programmable	-99999...999999 nebo -999...9999 Programmable	±199999	-99999...999999 Programmable	-99999...999999 nebo -999...9999 Programmable
0,5...10 measur./s	0,1...40 measur./s	1,2...10 measur./s	1...100 measur./s	
AC V-A METER OM 352AC 0...1/5 A; 0...60/300 mV; 0...24/50/80/120/250/400 V	UNIVERSAL INSTRUMENT OM 402UNI DC: ±60/±150/±300/±1200 mV PM: 0...20/4...20 mA; ±2/±5/±10/±40 V OHM: 0...100 Ω; 0...1/10/100 kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10 000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear Potentiometer (>500 Ω) Option A DC: ±0,1/±0,25/±0,5/±1/±5 A ±100/±250/±500 V Option B 3x PM: 0...20/4...20 mA; ±2/±5/±10/±40 V	DC V-A METER OM 45DC ±199,99 μA ±1,9999 mA; ±19,999 mA; ±199,99 mA ±1,9999 V; ±19,999 V; ±199,99 V PROCESS MONITOR OM 45PM 0...5 mA; 0...20 mA; 4...20 mA ±2 V; ±5 V; ±10 V	DC V-A METER OM 502DC ±999,99 μA; ±9,9999 mA; ±99,999 mA ±999,99 mA; ±5,0000 A; ±99,999 mV; ±999,99 mV; ±9,9999 V ±99,999 V; ±300,00 V PROCESS MONITOR OM 502PM 0...5/20 mA/4...20 mA; ±2/±5/±10 V INTEGRATOR OM 502I 0...5/20 mA/4...20 mA; ±2/±5/±10 V Time base: 1s Immediate/integrated value LINEARIZER OM 502LX 0...5/20 mA/4...20 mA; ±2/±5/±10 V Lin. approximation in 256 points and 16 labels DISPLAY FOR POTENTIOMETERS OM 502DU Pow. supply through a potentiometer 2,5 VDC/6 mA DISPLAY FOR STRAIN GAUGES OM 502T 1...16 mV/V Power bridge: 10 V/resist. > 80 Ω DISPLAY FOR LVDT OM 502LVDT	UNIVERSAL COUNTER OM 653UQC NPN, PNP, on contact, IRC, <30/300 V <50 kHz, <20 kHz (UP/DW) counter/frequency meter/timer/clock
DC V-A METER OM 352DC 0...1/5 A; 0...20/40/100/200 V	AC NETWORK ANALYSER OM 402PWR 0...1/5 A; 0...60/150/300 mV 0...10/120/250/450 V Voltage/Current/Active power/ Frequency/Idle power/Apparent power/Power factor DISPLAY FOR STRAIN GAUGES OM 402LC 1...4/2...8/4...16 mV/V Power bridge: 10 V/resist. > 80 Ω PID REGULATOR OM 402PID Input identical with OM 402UNI Parallel PID, PI, proportional regulation			
Digital filters, Rounding, Hold, Tare Button lock Linearization in 25 points	Digital filters, Rounding, Hold, Tare, Button lock, Min./max. value, Peak value, Math. operations, Linearization in 50 points *Data record RTC/FAST *Instrum. SW - ČSN 62138, kat. B/C		Digital filters, Rounding, Hold, Tare, Button lock, Min./max. value, Peak value, Math. operations, Linearization in 50 points *Data record RTC/FAST	Input filter, Digital filters, Rounding, Hold, Tare, Button lock, Preset, Summarization, Time backup Linearization in 25 points
*1...2 relays/open collectors, Mode - Hysteresis	*1...4 relays/open collectors, SSR Mode - Hysteresis/From-To/Dosage		*1...4 relays/open collectors, SSR Mode - Hysteresis/From-To/Dosage	*1...2 relays/open collectors Mode - Hyster./C-Puls/Once/On Run
*0...5/20 mA/4...20 mA, 0...2/5/10V, ±10 V, isolated	*0...5/20 mA/4...20 mA, 0...2/5/10V, ±10 V, Isolated		*0...5/20 mA/4...20 mA, 0...2/5/10V, ±10 V, Isolated	*0...5/20 mA/4...20 mA, 0...2/5/10V, ±10 V, Isolated
*RS 232, RS 485 ASCII, Profibus	*RS 232, RS 485 ASCII, MessBus, ModBus, Profibus		*RS 232, RS 485 ASCII, MessBus, ModBus, Profibus	*RS 232, RS 485 ASCII, MessBus, Profibus
5...24VDC/max. 1,2 W	5...24VDC/max. 1,2 W		5...24VDC/max. 1,2 W	5/12/17/24VDC/max. 2,5 W
10...30 VAC/DC, < 6,8 W/6,9 VA 80...250 VAC/DC, < 6,8 W/6,9 VA	10...30 VAC/DC, < 9,4 W/9,2 VA 80...250 VAC/DC, < 9,4 W/9,2 VA	230 VAC, 2,5 VA 12...24 VDC, 2,3 W	10...30 VAC/DC, < 8,0 W/7,8 VA 80...250 VAC/DC, < 8,0 W/7,8 VA	10...30 VAC/DC, < 6,9 W/7,3 VA 80...250 VAC/DC, < 6,9 W/7,3 VA
96 x 48 mm/90,5 x 45 mm	96 x 48 mm/90,5 x 45 mm	96 x 24 mm/90,5 x 21,5 mm	96 x 48 mm/90,5 x 45 mm	96 x 48 mm/90,5 x 45 mm
120 mm	120 mm	100 mm	120 mm	120 mm
IP 64	IP 64	IP 40	IP 65	IP 65

PANEL INSTRUMENTS



MODEL	OM 602	OM 621	OMU 408	OMB 402
TYPE	microcontroller	microcontroller	microcontroller	microcontroller
DISPLAY	999999 digit height 14mm red or green LED	999999 digit height 14mm red or green LED	999999 digit height 14mm red or green LED	30 LED - red/green/orange + display 999999 [9,1 mm]
PROJECTION	-99999...999999 Programmable	-99999...999999 Programmable	-999...9999 Programmable	30 LED + Auxiliary display Programmable
MEASUREMENT RATE			0,1...40 measur./s	0,1...40 measur./s
INPUT	<p>UNIVERSAL COUNTER OM 602UC 2 independent inputs NPN, PNP, on contact, IRC, <60 V <1MHz, <500 kHz [UP/DW, IRC] counter/frequency meter/period/ timer/clock</p> <p>DATA DISPLAY OM 602RS RS 232/485 ASCII, Messbus, Modbus, Profibus</p> <p>PROGRAMMABLE AV OM 602AV Manually/Sinus/Saw/Triangle/ Rectangle/Random value</p>	<p>BCD DISPLAY OM 621BCD 5...24/10...60/90...130/190...250 V BCD serial, parallel Transformer tapping leads - 24+ sign.</p>	<p>8-CHANNEL MEASUR. INSTRUMENT OMU 408UNI 4 or 8 inputs DC: ±60/±150/±300/±1200 mV PM: 0...20/4...20 mA; ±2/±5/±10/±40 V OHM: 0...100 Ω; 0...1/10/100 kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10 000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear potentiometer [>500 Ω]</p>	<p>UNIVERSAL INSTRUMENT OMB 402UNI DC: ±60/±150/±300/±1200 mV PM: 0...20/4...20 mA; ±2/±5/±10/±40 V OHM: 0...100 Ω; 0...1/10/100 kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10 000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear potentiometer [>500 Ω]</p> <p>Option A DC: ±0,1/±0,25/±0,5/±1/±5 A ±100/±250/±500 V</p>
FUNCTIONS	Input filtr, Digital filters, Rounding, Hold, Tare, Button lock, Preset, Sum, Time backup Mathematical operations, Linearization in 25 points	Digital filters, Rounding, Hold, Button lock, Min./max. value, Mathematical operations	Digital filters, Rounding, Hold, Tare, Button lock, Min./max. value, Peak value, Math. operations, Inputs switching, Linearization in 50 points *Data record RTC/FAST	Digital filters, Rounding, Hold, Tare, Button lock, Min./max. value, Peak value, Math. operations, Linearization in 50 points *Data record RTC/FAST *Instr. SW - ČSN 62138, cat. B/C
COMPARATORS	*1..4 relays/open collectors, SSR Mode - Hyst./From-To/Dosage/C-Puls		*4/8 relays/open collectors Mode - Hysteresis/From-To/Dosage	*1..4 relays/open collectors, SSR Mode - Hysteresis/From-To/Dosage
ANALOGUE OUTPUT	*0...5/20 mA/4...20 mA, 0...2/5/10 V, Isolated	*0...5/20 mA/4...20 mA, 0...2/5/10 V, Isolated	*0...5/20 mA/4...20 mA, 0...2/5/10 V, Isolated	*0...5/20 mA/4...20 mA, 0...2/5/10 V, ±10 V, Isolated
DIGITAL OUTPUT	*RS 232, RS 485 ASCII, MessBus, ModBus, Profibus	*RS 232, RS 485 ASCII, MessBus	*RS 232, RS 485 ASCII, MessBus, ModBus, Profibus	*RS 232, RS 485 ASCII, MessBus, ModBus, Profibus
EXCITATION	5...24VDC/max. 1,2 W	5...24VDC/max. 1,2 W		5...24VDC/max. 1,2 W
POWER SUPPLY	10...30 VAC/DC, < 8,0W/7,8 VA 80...250 VAC/DC, < 8,0W/7,8 VA	10...50 VAC/DC, < 6,5W/6,0 VA 80...250 VAC/DC, < 6,5W/6,0 VA	10...30 VAC/DC, < 8,0W/7,8 VA 80...250 VAC/DC, < 8,0W/7,8 VA	10...30 VAC/DC, < 10,6W/10,4 VA 80...250 VAC/DC, < 10,6W/10,4 VA
FRONT SIZE/PANEL CUTOUT	96 x 48mm/90,5 x 45 mm	96 x 48mm/90,5 x 45 mm	96 x 48mm/90,5 x 45 mm	96 x 48mm/90,5 x 45 mm
DEPTH BEHIND THE PANEL	120 mm	154 mm	120 mm	120 mm
COVER	IP 65	IP 65	IP 65	IP 64



OMB 412	OMB 451	OMB 452	OMB 200/300/500	OMD 202
microcontroller	microcontroller	microcontroller	microcontroller	microcontroller
24 LED - red/green/orange + display 999 (9,1 mm)	50 LED - red/green/orange + LCD scale + display 999999 (9,1 mm)	50 LED - red/green/orange + LCD scale + display 999999 (14 mm)	20/30/50 LED red/green/orange	9999 nebo 999999 digit height 57, 100 or 125 mm red/green/orange LED ultra bright red or green LED
24 three-color LED + display Programmable	50 three-color LED + display Programmable	50 three-color LED + display Programmable	20/30/50 three-color LED Programmable	-999...9999 nebo -99999...999999 Programmable
0,1...40 measur./s	0,1...40 measur./s	0,1...40 measur./s	0,4...50 measur./s	0,1...40 measur./s
UNIVERSAL INSTRUMENT OMB 412UNI DC: ±60/±150/±300/±1200 mV PM: 0...20/4...20 mA; ±2/±5/±10/±40 V OHM: 0...100 Ω; 0...1/10/100 kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10 000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear potentiometer (>500 Ω)	UNIVERSAL INSTRUMENT OMB 412UNI DC: ±60/±150/±300/±1200 mV PM: 0...20/4...20 mA; ±2/±5/±10/±40 V OHM: 0...100 Ω; 0...1/10/100 kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10 000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear potentiometer (>500 Ω)	UNIVERSAL INSTRUMENT OMB 412UNI DC: ±60/±150/±300/±1200 mV PM: 0...20/4...20 mA; ±2/±5/±10/±40 V OHM: 0...100 Ω; 0...1/10/100 kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10 000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear potentiometer (>500 Ω)	UNIVERSAL INSTRUMENT OMB 200UNI PM: 0...5 /20/4...20 mA; 0...2/5/10 V OHM: 0...100 kΩ RTD: Pt 1000 Ni: Ni 1000 DU: Linear potentiometer (>500 Ω)	UNIVERSAL INSTRUMENT OMD 202UNI DC: ±60/±150/±300/±1200 mV PM: 0...20/4...20 mA; ±2/±5/±10/±40 V OHM: 0...100 Ω; 0...1/10/100 kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10 000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear potentiometer (>500 Ω)
Option A DC: ±0,1/±0,25/±0,5/±1/±5 A ±100/±250/±500 V	Option A DC: ±0,1/±0,25/±0,5/±1/±5 A ±100/±250/±500 V	Option A DC: ±0,1/±0,25/±0,5/±1/±5 A ±100/±250/±500 V	UNIVERSAL INSTRUMENT OMB 300UNI PM: 0...5 /20/4...20 mA; 0...2/5/10 V OHM: 0...100 kΩ RTD: Pt 1000 Ni: Ni 1000 DU: Linear potentiometer (>500 Ω)	Option A DC: ±0,1/±0,25/±0,5/±1/±5 A ±100/±250/±500 V
	Option B 3x PM: 0...20/4...20 mA; ±2/±5/±10/±40 V	Option B 3x PM: 0...20/4...20 mA; ±2/±5/±10/±40 V	UNIVERSAL INSTRUMENT OMB 500UNI PM: 0...5 /20/4...20 mA; 0...2/5/10 V OHM: 0...100 kΩ RTD: Pt 1000 Ni: Ni 1000 DU: Linear potentiometer (>500 Ω)	Option B 3x PM: 0...20/4...20 mA; ±2/±5/±10/±40 V
			UNIVERSAL INSTRUMENT OMB 502UNI 2 inputs/2 columns PM: 0...5 /20/4...20 mA; 0...2/5/10 V OHM: 0...100 kΩ RTD: Pt 1000 Ni: Ni 1000 DU: Linear potentiometer (>500 Ω)	UNIVERSAL COUNTER OMD 202UQC NPN, PNP, on contact, IRC, <60 V <1MHz, <500 kHz (UP/DW, IRC) counter/frequency meter/period/timer/clock
				DATA DISPLAY OMD 202RS RS 232/485 ASCII, Messbus, Modbus, Profibus
Digital filters, Rounding, Hold, Tare, Button lock, Min./max. value, Peak value, Math. operations, Linearization in 50 points *Data record RTC/FAST *Instr. SW - ČSN 62138, cat. B/C	Digital filters, Rounding, Hold, Tare, Button lock, Min./max. value, Peak value, Math. operation, Linearization in 50 points *Data record RTC/FAST *Instr. SW - ČSN 62138, cat. B/C	Digital filters, Rounding, Hold, Tare, Button lock, Min./Max. Value, Peak Value, Math. operations, Linearization in 50 points *Data record RTC/FAST *Instr. SW - ČSN 62138, cat. B/C	Digital filters, Rounding, Hold, Linearization in 25 points	Digital filters, Rounding, Hold, Tare, Button lock, Min./Max. Value, Peak Value, Math. operations, Linearization in 50 points
*1...4 relays/open collectors, SSR Mode - Hysteresis/From-To/Dosage	*1...4 relays/open collectors Mode - Hysteresis/From-To/Dosage	*1...4 relays/open collectors Mode - Hysteresis/From-To/Dosage	*1...3 relays/open collectors Mode - Hysteresis	*1...4 relays/open collectors Mode - Hyst./From-To/Dosage/C-Puls
*0...5/20 mA/4...20 mA, 0...2/5/10V, ±10 V, Isolated	*0...5/20 mA/4...20 mA, 0...2/5/10V, ±10 V, Isolated	*0...5/20 mA/4...20 mA, 0...2/5/10V, ±10 V, Isolated		*0...5/20 mA/4...20 mA, 0...2/5/10V, ±10 V, Isolated
*RS 232, RS 485 ASCII, MessBus, ModBus, Profibus	*RS 232, RS 485 ASCII, MessBus, ModBus, Profibus	*RS 232, RS 485 ASCII, MessBus, ModBus, Profibus		*RS 232, RS 485 ASCII, MessBus, ModBus, Profibus
5...24VDC/max. 1,2W	5...24VDC/max. 1,2W	5...24VDC/max. 1,2W		5...24VDC/max. 1,2W
10...30 VAC/DC, < 10,6W/10,4VA 80...250 VAC/DC, < 10,6W/10,4VA	10...30 VAC/DC, < 15,5W/15,5VA 80...250 VAC/DC, < 15,5W/15,5VA	10...30 VAC/DC, < 16W/16VA 80...250 VAC/DC, < 16W/16VA	10...30 VAC/DC, < 5W/5,4VA *80...250 VAC/DC, < 5W/5,4VA	10...30 VAC/DC, < 22W/22VA 80...250 VAC/DC, < 22W/22VA
48 x 96 mm/45 x 90,5 mm	160 x 60 mm/150 x 50 mm	160 x 80 mm/150 x 70 mm	200 - 72 x 24 mm; 300 - 96 x 24 mm 500/502 - 144 x 48 mm	57 - 374 x 119 mm; 651/465 x 181 mm 754/539 x 237 mm
120 mm	80 mm	80 mm	100; 100; 75 mm	88 mm
IP 64	IP 64	IP 64	IP 40	IP 64

ABOUT THE COMPANY

PANEL INSTRUMENTS

TRANSMITTERS

PLC

PAPERLESS RECORDER

ACCESSORIES

TRANSMITTERS TO DIN RAIL



MODEL	OMX 39	OMX 102	OMX 333	OMX 380
TYPE	analogue	microcontroller	microcontroller	microcontroller
DISPLAY		4x 999 digit height 14mm LCD display with backlight		
PROJECTION		-99m...999M Programmable		
MEASUREMENT RATE	continuous measurement	0,5...160 measur./s	0,5...80 measur./s	25...7500 measur./s
INPUT	<p>DC V-A METER OMX 39DC unipolar or bipolar range to 5A; 450V (according to order)</p> <p>AC V-A METER OMX 39AC 0...5A; 0...450V</p> <p>PROCESS MONITOR OMX 39PM 0...5mA; 0...20mA; 4...20mA; 0...2V; 0...5V; 0...10V</p> <p>POWER OMX 39W 0...1A; 0...5A; 0...60mV; 0...150mV; 0...300mV; 0...120V; 0...150V; 0...250V; 0...450V</p> <p>RESISTANCE OMX 39OHM range to 100kΩ (according to order)</p> <p>TEMPERATURE OMX 39RTD Pt 100/500/1000</p> <p>LINEAR POTENTIOMETER OMX 39DU Linear potentiometer (>500Ω)</p>	<p>UNIVERSAL INSTRUMENT OMX 102UNI 2 inputs DC: ±90/±180mA ±30/±60/±1000mV; ±20/±40/±80V PM: ±5/±20/4...20mA; ±2/±5/±10V OHM: 0...100/300Ω; 0...15/3/24kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear potentiometer (>500Ω)</p>	<p>DC V-A METER OMX 333DC ±0,5/±1/±5A ±25/±50/±100/±200/±400V</p> <p>UNIVERSAL INSTRUMENT OMX 333UNI DC: ±90/±180mA ±30/±60/±1000mV; ±20/±40/±80V PM: ±5/±20/4...20mA; ±2/±5/±10V OHM: 0...100/300Ω; 0...15/3/24kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear potentiometer (>500Ω)</p> <p>UNIVERSAL COUNTER OMX 333UQC NPN, PNP, on contact, <30/300V <50kHz, <20kHz [UP/DW] counter/frequency meter/timer/clock</p>	<p>PROCESS MONITOR OMX 380PM 0...20mA/4...20mA/0...10V</p> <p>LINEAR POTENTIOMETER OMX 380DU Linear potentiometer (>500Ω)</p> <p>STRAIN GAUGE OMX 380T 1...4/2...8/4...16mV/V Power bridge: 10V/resistance > 80Ω</p>
FUNCTIONS		Digital filters, Hold, tare, Button lock, Min./max. value, Peak value, Math. operations, Linearization in 177 points *Instr. SW - ČSN 62138, cat. B/C	Digital filters, Hold, Tare, Button lock, Linearization in 25 points	Digital filters, Hold, Tare, Button lock, Teach-in
GALVANIC ISOLATION	3,75 kVAC	2,5 kVAC	2,5 kVAC	2,5 kVAC
COMPARATORS		*1...2 relays/open collectors Mode - Hyster./From-To/Dosage/Err.	*1...2 relays/open collectors Mode - Hysterisis/Ready/Error	
ANALOGUE OUTPUT	*0...20 mA; 4...20 mA; ±20mA, 0...2/5/10V, ±10 V, Isolated	0...5/20 mA/4...20 mA, 0,1...10100Hz 0...2/5/10V, ±10 V, Isolated	0...5/20 mA/4...20 mA, 0...2/5/10V, ±10 V, Isolated	4...20 mA/0...10V/±10 V, Isolated
DATA OUTPUT		*RS 232, RS 485 ASCII, MessBus, ModBus, Profibus	*RS 485 ASCII	*RS 485 ASCII, MessBus, ModBus
EXCITATION	5...24VDC/max. 1,2W			15V; 24VDC/40mA
POWER SUPPLY	10...30VAC/DC, < 2,4W/2,6VA 80...250VAC/DC, < 2,4W/2,6VA	10...30VAC/DC, < 9,4W/9,2VA 80...250VAC/DC, < 9,4W/9,2VA	10...30VDC/24VAC, <2W/2VA	10...30VDC/24VAC, < 2,5W/2,3VA
DIMENSIONS	22 x 98 x 113mm	35 x 98 x 113mm	25 x 79 x 90,5mm	25 x 79 x 90,5mm
MOUNTING	to DIN rail	to DIN rail	to DIN rail	to DIN rail
COVER	IP 20	IP 20	IP 20	IP 20



OMX Profibus

microcontroller

TRANSMITTER PROFIBUS ↔ RS 485

OMX Profibus

EIA RS 485
PROFIBUS DP
Communication for OM instruments
and for Profibus busbar

Digital filters, Rounding, Hold, Tare
Button lock
Linearization in 25 points

2,5 kVAC

RS 485
OM ASCII

10...30 VAC/DC, < 1,5W/1,5VA
80...250 VAC/DC, < 1,5W/1,5VA

22 x 98 x 113mm

to DIN rail

IP 20



MODEL

OMP 38

OMP 100

TYPE

analogue

analogue

OUTPUT

**STABILIZED SOURCE
OMP 38**

A - 5 VDC/450 mA
12 VDC/300 mA
24 VDC/150 mA
B - 5 VDC/450 mA
15 VDC/240 mA
24 VDC/150 mA

Switch adjustable range

**STABILIZED SOURCE
OMP 100**

A - 2x 5 VDC/8A
B - 2x 12 VDC/4A
C - 2x 15 VDC/3,2A

Serial or parallel output connection

FUNCTIONS

Active current limitation

Active current limitation
Active power factor compensation

POWER SUPPLY

80...250 VAC/DC, < 6W/6VA

230 VAC, < 115 W

DIMENSIONS

22 x 98 x 113mm

35 x 98 x 113mm

MOUNTING

to DIN rail

to DIN rail

COVER

IP 20

IP 20

For our PLC OMC 8000 range we selected a 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 placed both nearby or at a distance. The maximum distance is up to 40m. If this distance is not sufficient or if more computing or communication performance is needed (programme division into multiple PLCs), you can use, almost at any distance, connection of the main modules using UDP over ETHERNET line.

Communication between modules is ensured by CAN line. However, with the increasing number of modules, it is necessary to count on increasing demands on communication with them.

The main module can be powered by 230V or 24V. It contains 3 digital inputs, which react to the level of the power supply voltage, and 6 universal inputs sharing a common ground terminal. They are all electrically isolated from outputs and power supply.

ADVANTAGES OF OMC 8000

- Module architecture with connectivity options for up to 31 modules
- TFT color display providing information on the status of the entire system
- ETHERNET 100Base, MODBUS TCP/IP
- WEB Server
- data recording on a microSD card with an optional time stamp for subsequent analysis
- universality of inputs (digital, analogue, frequency, data)
- two inputs for IRC sensors (500 kHz) or six inputs PNP/NPN/contact (50 kHz)
- five relay or DC outputs
- analogue output
- micro SD card slot for program transfer and measured data recording
- on-line editing to enable program debugging
- programming according to EN 61131-3 standard



INPUTS - SIGNAL CONNECTION

ANALOGUE

voltage to 30V; current to 20 mA; resistance to 3,9kΩ;
Pt 100, Pt 1000, Ni 1000; T/C - B, E, J, K, L, N, R, S, T, XK; KTY81-2xx

IMPULS

to 30V, on contact, NPN open collector, 2x incremental sensor

DATA

RS 485, one pair of analogue inputs can be used as a data output for further communication

DEVELOPMENT ENVIRONMENT ACCORD TO IEC 61131

MULTIPROG PRO is a demanding, sophisticated programming system for development of PLC applications, which provides professional help during all phases of project development.

MULTIPROG PRO offers an advanced graphics editor with the function of automatic objects linking, and sophisticated text editor with language syntax highlighting and IntelliSense. Last but not least it provides the option of entering / editing variables in a synoptical table. For quick and smooth start of a new project in the environment of MULTIPROG PRO you can use Project Wizard or Templates.

MULTIPROG PRO supports all 5 languages IEC 61131

- Structured Text (ST)
- Instruction List (IL)
- Ladder Diagram (LD)
- Function Block Diagram (FBD)
- Sequential Function Chart (SFC)

MULTIPROG PRO provides powerful features for solving problems or putting PLC applications into operation. The development environment offers a computer simulation of the PLC application or signal monitoring with the help of a logic analyzer. Each programmer of PLC applications will appreciate the possibility of using code breakpoints and setting of a debug address. In debug mode MULTIPROG allows you to step through the PLC program or to set or overwrite variables.

Communication options of the MULTIPROG PRO environment take advantage of all the benefits of a robust Ethernet interface.

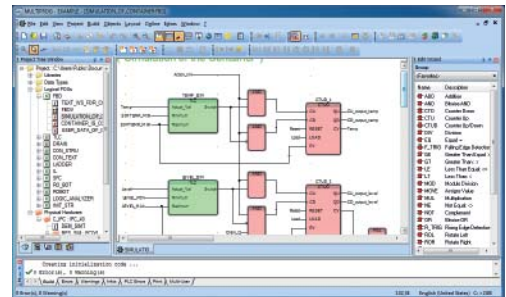
Using protocol TCP/IP:

- uploading applications to the PLC
- remote variables reading/writing using OPC Server
- WEB Server, FTP

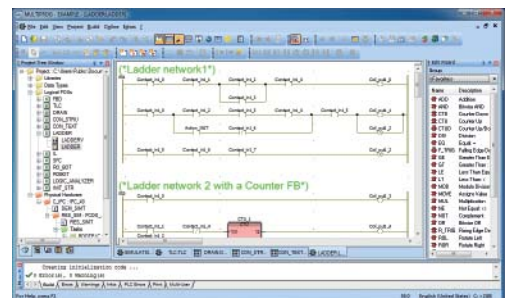
Using protocol UDP/IP:

- Remote access to PLC for reading/writing variables

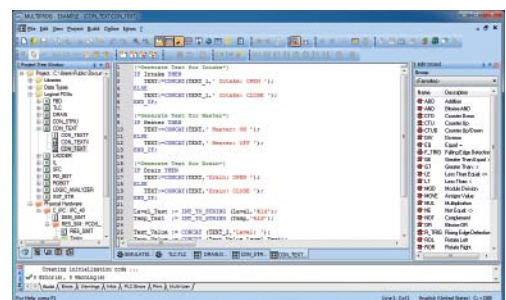
Another advantage of the environment MULTIPROG PRO consists of a sophisticated context help system. No complicated searching, help for the current item is immediately ready to display.



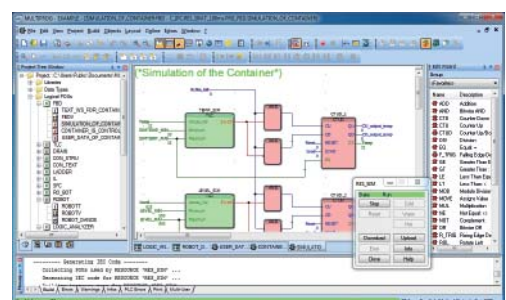
PICTURE 1: FUNCTION BLOCK DIAGRAM (FBD)



PICTURE 2: LADDER DIAGRAM (LD)



PICTURE 3: STRUCTURED TEXT (ST)



PICTURE 4: ON-LINE APPLICATION DEBUG



MODULE	OMC 8000	Digital inputs	Analogue inputs	Digital inputs
TYPE	main module	expansion module	expansion module	expansion module
INTER-MODULE INTERFACE	CanBus, < 1 Mbit/s	CanBus, < 1 Mbit/s	CanBus, < 1 Mbit/s	CanBus, < 1 Mbit/s
MEASUREMENT RATE	1000 measur./s	< 4ms	1000 measur./s	< 8ms (relay), < 1ms (OC)
FEATURES	<p>Display 1,7" TFT color 160 x 128 points</p> <p>3x Digital inputs 12...30V AC/DC or 100...250V AC/DC, range equals power voltage of the instrument</p> <p>6x Analogue/Digital inputs 0...60/450 mV 0...2,8/10/20/30V 0/4...20 mA 0...390/3900 Ω Pt 100 Pt 1000/Ni 1000 T/C - J/K/T/E/B/S/R/N/L PNP/NPN/kontakt [0,5 kHz] IRC [500 kHz], [2x] RS 485</p> <p>Comparators* 5 relays/open collectors ON/OFF, PWM [10 kHz]</p> <p>Analogue output* 0...5/20 mA/4...20 mA, 0...2/5/10V, ±10 V, isolated</p> <p>Data output* RS 485 ASCII, MODBUS RTU (Master/Slave) ETHERNET 100Base MODBUS over TCP (Master/Slave) UDP, VNC, HTTP, FTP</p> <p>Rate < 0,11ms/1000 instrukci</p> <p>Time backup RTC, < 20 days</p> <p>Memory internal Flash NAND 512MB program 1MB data 1MB shared data 8kB data storage 1kB</p> <p>External media micro SD card with support of FAT32 up to 32 GB</p>	<p>15x DIGITAL INPUT OMC 8101-15DI 12...250V AC/DC</p> <p>36x DIGITAL INPUT OMC 8001-36DI 12...250V AC/DC</p>	<p>8x ANALOGUE INPUT OMC 8111-8UNI DC: 0...60/450 mV 0...2,8/10/30V PM: 0...20/4...20 mA OHM: 0...390/3900 Ω RTD: Pt 100/1000 Ni: Ni 1000 T/C: J/K/T/E/B/S/R/N/L UQC: PNP/NPN/contact [0,5/500 kHz] IRC [500 kHz], [2x]</p> <p>4x ANALOGUE INPUT OMC 8111-4DU 4x Linear potentiometer (< 500 Ω)</p> <p>2x ANALOGUE INPUT OMC 8121-2UNI DC: ±90/±180 mA ±30/±60/±1000 mV; ±20/±40/±80 V PM: ±5/±20/4...20 mA; ±2/±5/±10 V OHM: 0...100/300 Ω; 0...15/3/24 kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear potentiometer (>500 Ω)</p> <p>2x ANALOGUE INPUT OMC 8131-2DC ±1/±10/±100 mA/±1/±5 A ±1/±10/±100/±300 V</p> <p>2x ANALOGUE INPUT OMC 8131-2PM 0...5/0...20/4...20 mA ±2/±5/±10 V</p>	<p>4x DIGITAL OUTPUT-RELAY OMC 8101-4DOR 4x relay with switching contact ON/OFF 250 VAC/24 VDC/10 A, max. 2500 VA/240W</p> <p>6x DIGITAL OUTPUT-OC OMC 8101-6DOC 6x open collector [OC-NPN] ON/OFF, PWM [10/1000 kHz] 30VDC/300 mA, max. 9 W</p> <p>8x DIGITAL OUTPUT-OC OMC 8181-8DOC 6x open collector [OC-PNP] ON/OFF, PWM [10/1000 kHz] 12...30VDC/700 mA, max. 21 W</p>
POWER SUPPLY	12...30VDC/24VAC, < 7,7W/7,0VA 100...250V AC/DC, < 7,7W/7,0VA	via interface	via interface	via interface

DIMENSIONS	72 x 91 x 60 mm	OMC 8101-15DI 36 x 91 x 60 mm OMC 8001-36DI 72 x 91 x 60 mm	36 x 91 x 60 mm	36 x 91 x 60 mm
MOUNTING	to DIN rail	to DIN rail	to DIN rail	to DIN rail
COVER	IP 20	IP 20	IP 20	IP 20



Digital inputs/outputs	Analogue outputs	Combined	Data outputs	Power sources
expansion module	expansion module	expansion module	expansion module	expansion module
CanBus, < 1 Mbit/s	CanBus, < 1 Mbit/s	CanBus, < 1 Mbit/s	CanBus, < 1 Mbit/s	
<8ms [relay], <1ms [DC]		0,1...40 measur./s		
<p>10x DIGITAL OUTPUT-RELAY OMC 8000-8DI.10DOR 10x relay with switching contact ON/OFF; 250 VAC/24 VDC/10 A, max. 2500 VA/240W 8x Digital input, 12...250V AC/DC</p> <p>10x DIGITAL OUTPUT-DC OMC 8000-8DI.10DOC 10x open collector [OC-NPN] ON/OFF, PWM [10/1200 kHz] 30VDC/300 mA, max. 9 W 8x Digital input, 12...250V AC/DC</p> <p>10x DIGITAL OUTPUT-RELAY/DC OMC 8000-8DI.10DOCR 5x relay with switching contact 5x open collector [OC-NPN] 8x Digital input, 12...250V AC/DC</p> <p>12x DIGITAL OUTPUT-DC OMC 8000-12DI.12DOC 12x open collector [OC-NPN] ON/OFF, PWM [10 kHz] 30VDC/300 mA, max. 9 W 12x Digital input, 12...250V AC/DC</p> <p>24x DIGITAL OUTPUT-DC OMC 8000-8DI.10DOC 24x open collector [OC-NPN] ON/OFF, PWM [10 kHz] 30VDC/300 mA, max. 9 W 12x Digital input, 12...250V AC/DC</p> <p>24x DIGITAL OUTPUT-DC OMC 8000-8DI.10DOC 24x open collector [OC-PNP] ON/OFF, PWM [10 kHz] 12...30VDC/700 mA, max. 21 W 12x Digital input, 12...250V AC/DC</p>	<p>1x ANALOGUE OUTPUT OMC 8101-5DI.AO 0...5/0...20/4...20 mA; 0...2/5/10V/±10V 5x Digital input, 12...250V AC/DC</p> <p>2x ANALOGUE OUTPUT OMC 8001-8DI.2AO 0...5/0...20/4...20 mA; 0...2/5/10V/±10V 8x Digital input, 12...250V AC/DC</p> <p>4x ANALOGUE OUTPUT OMC 8001-8DI.4AO 0...5/0...20/4...20 mA; 0...2/5/10V/±10V 8x Digital input, 12...250V AC/DC</p>	<p>2x UNIVERSAL INPUT OMC 8020-2UNI DC: ±90/±180 mA ±30/±60/±1000 mV; ±20/±40/±80 V PM: ±5 /±20/4...20 mA; ±2/±5/±10 V OHM: 0...100/300 Ω; 0...1.5/3/24 kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10 000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear potentiometer (>500 Ω)</p> <p>2x UNIVERSAL INPUT + RELAY OMC 8020-2UNI.5DOR equals OMC 8020-2UNI + 5x relay with switching contact ON/OFF; 250 VAC/24 VDC/10 A</p> <p>2x UNIVERSAL INPUT + DC OMC 8020-2UNI.5DOC equals OMC 8020-2UNI + 5x open collector [OC-NPN] ON/OFF, PWM [10 kHz] 30VDC/300 mA, max. 9 W</p> <p>2x UNIVERSAL INPUT + AV OMC 8020-2UNI.2AO equals OMC 8020-2UNI + 2x Analogue output 0...5/20/4...20 mA; 0...2/5/10/±10 V</p> <p>2x STRAIN GAUGE INPUT OMC 8020-2T 1...16 mV/V Power bridge: 10 V/zátěž > 80 Ω</p> <p>2x STRAIN GAUGE INPUT - RELAY OMC 8020-2T.5DOR equals OMC 8020-2T + 5x relay with switching contact ON/OFF; 250 VAC/24 VDC/10 A</p> <p>2x STRAIN GAUGE INPUT - DC OMC 8020-2T.5DOC equals OMC 8020-2T + 5x open collector [OC-NPN] ON/OFF, PWM [10 kHz]</p> <p>2x STRAIN GAUGE INPUT - AV OMC 8020-2T.52AO equals OMC 8020-2T + 2x Analogue output 0...5/20/4...20 mA; 0...2/5/10/±10 V</p>	<p>DATA OUTPUT-RS 232/485 OMC 8101-5DI.RS 1x RS 232, 3x RS 485 ASCII/MESSBUS/MODBUS RTU 5x Digital input, 12...250V AC/DC</p> <p>DATA OUTPUT-CAN/RS 485 OMC 8101-5DI.CAN 1x Can, 2x RS 485 CAN ASCII/MESSBUS/MODBUS RTU 5x Digital input, 12...250V AC/DC</p> <p>DATA OUTPUT-PROFIBUS DP OMC 8101-5DI.PB 1x EIA RS-485 PROFIBUS DP, slave 5x Digital input, 12...250V AC/DC</p> <p>DATA OUTPUT-PROFINET OMC 8101-5DI.PN 2x PROFINET Device 5x Digital input, 12...250V AC/DC</p> <p>DATA OUTPUT-GSM OMC 8000-GSM GSM Quad-Band 5x Digital input, 12...250V AC/DC *3 relay/open collectors</p>	<p>DC VOLTAGE SOURCE OMC 8100-PS Module is designed for auxiliary power bus [5V/1A]</p> <p>DC VOLTAGE SOURCE OMC 8100-PS30 Module is designed for auxiliary power bus [5V/1A], complemented with a DC power source [24V/1A]</p>
12...30VDC/24VAC, < 5,5W/5,0VA 100...250VAC/DC, < 5,5W/5,0VA	<p>OMC 8101 via interface</p> <p>OMC 8001 12...30VDC/24VAC, < 5,5W/5,0VA 100...250VAC/DC, < 5,5W/5,0VA</p>	12...30VDC/24VAC, < 5,5W/5,0VA 100...250VAC/DC, < 5,5W/5,0VA	<p>OMC 8101 via interface</p> <p>OMC 8000-GSM 12...30VDC/24VAC, < 5,5W/5,0VA 100...250VAC/DC, < 5,5W/5,0VA</p>	<p>OMC 8100-PS 12...30VDC/24VAC, < 5,5W/5,0VA 100...250VAC/DC, < 5,5W/5,0VA</p> <p>OMC 8100-PS30 100...250VAC/DC, < 40W/40VA</p>
72 x 91 x 60 mm	<p>OMC 8101 36 x 91 x 60 mm</p> <p>OMC 8001 72 x 91 x 60 mm</p>	72 x 91 x 60 mm	<p>OMC 8101 36 x 91 x 60 mm</p> <p>OMC 8000-GSM 72 x 91 x 60 mm</p>	<p>OMC 8100-PS 36 x 91 x 60 mm</p> <p>OMC 8100-PS30 72 x 91 x 60 mm</p>
to DIN rail	to DIN rail	to DIN rail	to DIN rail	to DIN rail
IP 20	IP 20	IP 20	IP 20	IP 20



PAPERLESS RECORDER OMR 700

This recorder is intended for technologies and workings where it is needed to display and/or record a number of electrical and nonelectrical values at one place. Universality, versatility and in particular good value for money predestine the recorder to fulfil most of your demanding needs including the IP64 front panel cover.

Our paperless recorder has been developed with versatility and intuitive control in mind. Thanks to its modularity the user can insert input or output cards into any of the 8 existing slots. Maximal configuration of the recorder thus allows to measure and record up to 96 inputs. In order to increase reliability, the recorder has two systems - primary and backup.

Always on board are digital control inputs and outputs, serial line RS 485, Ethernet 10/100, USB connector as well as 512 MB internal memory to record the measured data.

MODULES

The development of the device has been performed with an increased emphasis on technical solutions and universality. Card design not only allows their use in any position of the recorder, but also their additional insertion into vacant slots. Thus, if new requirements to increase the number or type of inputs and outputs occur in the course of using the recorder, just order another card and insert it into a vacant slot. In this way the instrument can „grow“ in compliance with your requirements.

All analogue modules are fully isolated from the internal bus, and some cards have galvanic isolation even between individual channels.

Basic version of the recorder includes power supply module and communication module with Ethernet 10/100, RS 485 (ASCII, MODBUS), five digital inputs and two digital outputs.

PROJECTION

COLOR 5,7" TFT display with fine resolution dominates the device. The display is multitouch and it therefore allows an ease of use.

CONTROL

Recorder is controlled by both the touch screen and the push buttons positioned underneath a sliding front door. Two LEDs indicate run/error and state of data recording.

SETTING

All functions and settings can be performed directly on the instrument display in a clear graphical menu. For a more comfortable setting a USB keyboard or mouse can be connected.



REGISTRATION INSTRUMENT WITH 8 POSITIONS FOR PLUG-IN MODULES

- analogue inputs, max. 12 inputs/module
- digital inputs, max. 12 inputs/module
- analogue outputs, max. 4 outputs/module
- digital outputs, max. 10 outputs/module
- data outputs

BASIC FEATURES

- color TFT display 5,7" with capacity panel
- primary and backup systems
- digital inputs and outputs
- internal memory recording, SD card or USB Flash drive
- Ethernet 10/100B, RS 485 - Modbus
- USB, microUSB
- internal data memory 2x 512 MB
- sound module
- RTC
- size 150 x 150 mm
- cover IP64
- power supply 80...250 V AC/DC

DATA RECORDING

The OMR 700 can record measured data from any of its active inputs, nodes and mathematical functions. Data are stored in internal NAND 512 MB memory with compression that allows up to four-fold increase in its physical memory without slowing down.

Data can also be stored on an external SD card or USB flash drive. In case of a limited number of measuring inputs, measurement data can be stored with a period of up to 1 ms. The records can be either in BIN or „CVS“ formats. However, the latter is much more demanding on memory.

NUMBER OF RECORDS DEPENDING ON INSTRUMENT FEATURES / MEASUREMENT RATES

Record rate	16 inputs	48 inputs	80 inputs	96 inputs
1 ms	2 hours	x	x	x
10 ms	20 hours	7,5 hour	x	x
1 s	2,5 months	1 month	16 days	13 days
1 min	13 years	5 years	2,5 years	2,2 years
10 min	132 years	52 years	26 years	22 years

...AND ON TOP OF IT

Under the hinged lid, which can be opened by a light pressure upon the blue riders, there is access to control push buttons, SD card slot, USB Flash drive connector, and to microUSB for recorder settings via PC.



In the lower right corner you will find Stylus, ready for easier operation and writing on the display. Cover of the lid is IP64 so that your recorder, SD card, and USB Flash disc will always stay dry. If necessary, a seal can be fitted to the hinged lid as a mechanical security against possible accidental opening. Your SD card or USB Flash drive will remain safely stored.

PAPERLESS RECORDER



MODEL	OMR 700	Analogue inputs	Analogue inputs	Analogue inputs
TYPE	main module	plug-in card	plug-in card	plug-in card
INTER-MODULE INTERFACE	SPI, < 5 Mbit/s	SPI, < 5 Mbit/s	SPI, < 5 Mbit/s	SPI, < 5 Mbit/s
GALVANIC ISOLATION	3,75 kVAC	3,75 kVAC	3,75 kVAC	3,75 kVAC
MEASUREMENT RATE	< 1000 measur./s	< 1000 measur./s	< 1000 measur./s	< 1000 measur./s
FEATURES	<p>Display 5,7" color TFT with capacity touch control</p> <p>Data recording Into device memory (512 MB) with up to 4-fold compression USB Flash with support of FAT32 up to 32 GB SD card with support of FAT32 up to 32 GB</p> <p>Communication RS 485 ASCII, MODBUS RTU (Master/Slave) ETHERNET 100Base MODBUS over TCP (Master/Slave) UDP, VNC, HTTP, FTP, SMTP Wi-Fi: facultative module with standard or industrial temperature range</p> <p>5x Digital inputs 12...30VDC with optional function</p> <p>2x Digital inputs 12...30VDC with optional function</p> <p>Sound signalization Sound module with 1,5W loudspeaker</p>	<p>3x ANALOGUE INPUT-UNI IN.1 DC: ±90/±180 mA ±30/±60/±1000 mV; ±20/±40/±80 V PM: ±5/±20/4...20 mA; ±2/±5/±10 V OHM: 0...100/300 Ω; 0...1,5/3/24 kΩ RTD: Pt 50/100/500/1000 Ni: Ni 1000/10 000 Cu: Cu 50/100 T/C: J/K/T/E/B/S/R/N/L DU: Linear potentiometer (>500 Ω)</p> <p>Outputs galvanically isolated 3,75 kVAC</p> <p>Accuracy ±0,15% of range</p> <p>Measurement rate < 40 measur./s</p> <p>Connection 2, 3 or 4 wire</p> <p>4x ANALOGUE INPUT-PM IN.2 0...5/20/4...20 mA ±2/±5/±10/±40 V Outputs galvanically isolated 3,75 kVAC</p> <p>Accuracy ±0,2% of range</p> <p>4x ANALOGUE INPUT-RTD IN.3 Pt 50/100/500/1000 Ni 1000/10 000 Cu 50/100</p> <p>Connection 2 or 3 wire</p> <p>Outputs galvanically isolated 3,75 kVAC</p> <p>Accuracy ±0,2% of range</p> <p>4x ANALOGUE INPUT-T/C IN.4 J/K/T/E/B/S/R/N/L</p> <p>Outputs galvanically isolated 3,75 kVAC</p> <p>Accuracy ±0,2% of range</p>	<p>5x ANALOGUE INPUT-RTD IN.5 Pt 50/100/500/1000 Ni 1000/10 000 Cu 50/100</p> <p>Connection 2 or 3 wire</p> <p>Accuracy ±0,2% of range</p> <p>12x ANALOGUE INPUT-I IN.6 ±5/±20/4...20 mA</p> <p>Accuracy ±0,2% of range</p> <p>12x ANALOGUE INPUT-U IN.7 ±2/±5/±10/40 V</p> <p>Accuracy ±0,2% of range</p>	<p>2x STRAIN GAUGE INPUT IN.8 1...16 mV/V Power bridge: 10 V/resist. > 80 Ω</p> <p>Outputs galvanically isolated 3,75 kVAC</p> <p>Accuracy ±0,02% of range</p> <p>3x ANALOGUE INPUT IN.9 0/4...20 mA/±5/±10 V</p> <p>Outputs galvanically isolated 3,75 kVAC</p> <p>Accuracy ±0,02% of range</p> <p>2x AC-PWR INPUT IN.10 0...1/5 A 0...60/150/300 mV 0...10/120/250/450 V Voltage/Current/Active power/ Frequency/Reactive power/Apparent power/Power factor</p> <p>Outputs galvanically isolated 3,75 kVAC</p> <p>Accuracy ±0,02% of range</p> <p>Measurement rate < 10 measur./s</p>
POWER SUPPLY	12...30VDC/24VAC, < 30 W/30 VA 80...250 VAC/DC, < 30 W/30 VA	via internal interface	via internal interface	via internal interface
FRONT SIZE/PANEL CUTOUT	150 x 150 mm/138 x 138 mm			
DEPTH BEHIND THE PANEL	80 mm			
COVER	IP 64			

Analogue/Digital inputs	Čítačové vstupy	Digitální výstupy	Analogové výstupy	Datové výstupy
plug-in card	plug-in card	plug-in card	plug-in card	plug-in card
SPI, < 5 Mbit/s	SPI, < 5 Mbit/s	SPI, < 5 Mbit/s	SPI, < 5 Mbit/s	SPI, < 5 Mbit/s
3,75 kVAC	3,75 kVAC	3,75 kVAC	3,75 kVAC	3,75 kVAC
~ 100 ms		<8 ms [relay], <5 ms [OC]	1ms	
8x ANALOGUE/DIGITAL INPUTS IN.11 8x input, 12...250 VAC/DC	12x COUNTER/FREQUENCY IN.12 NPN, PNP, on contact, <30 V 0,1Hz...10 kHz optional input level 2x UP/DW COUNTER/FREQUENCY IN.13 5/24 V, TTL/Linkový 0,1Hz...1MHz optional input leve Outputs galvanically isolated 3,75 kVAC Power supply for IRC sensors 5/24 VDC/2 W	4x DIGITAL OUTPUT-RELAY OUT.1 4x relay with switching contact ON/OFF 250 VAC/24 VDC/3 A 8x DIGITAL OUTPUT-RELAY OUT.2 8x relay with switching contact ON/OFF 250 VAC/24 VDC/3 A 8x DIGITAL OUTPUT-OC OUT.3 8x open collector [OC-NPN] ON/OFF, PWM [10/1 000 kHz] 30VDC/300 mA, max. 9 W 16x DIGITAL OUTPUT-OC OUT.4 16x open collector [OC-NPN] with common end ON/OFF, PWM [10/1 000 kHz] 30VDC/300 mA, max. 9 W 8x DIGITAL OUTPUT-OC OUT.5 8x open collector [OC-PNP] ON/OFF, PWM [10 kHz] 30VDC/700 mA, max. 21 W 6x DIGITAL OUTPUT-SSR OUT.5 6x Solid state relays ON/OFF 250VDC/1 A	2x ANALOGUE OUTPUT AO.1 0...20/4...20 mA 0...2/5 V/±5 V/±10 V compensation: < 600 Ω/12 V Outputs galvanically isolated 3,75 kVAC 4x ANALOGUE OUTPUT AO.2 0...20/4...20 mA 0...2/5 V/±5 V/±10 V compensation: < 600 Ω/12 V Outputs galvanically isolated 3,75 kVAC	DATA OUTPUT-PROFIBUS DP DO.1 1x EIA RS-485 PROFIBUS DP DATA OUTPUT-PROFINET DO.2 PROFINET 2x ETH UTP connector
via internal interface	via internal interface	via internal interface	via internal interface	via internal interface

ABOUT THE COMPANY

PANEL INSTRUMENTS

TRANSMITTERS

PLC

PAPERLESS RECORDER

ACCESSORIES

ACCESSORIES



MODEL	OMA 10S	OM LINK-USB II	OM USB-RS II	OM USB-ISO	
TYPE	analogue	microcontroller	microcontroller	microcontroller	
DISPLAY					
PROJECTION					
MEASUREMENT RATE	continuous	12Mb/230 400 Baud	12Mb/921 600 Baud	12 Mb/12 Mb	
INPUT	MANUAL SWITCH OF MEASURING POINTS OMA 10S 4x 10 positions resistance 30VDC/10mA	ISOLATED OM Link TRANSMITTER OM LINK-USB II Isolated USB transmitter for customized configuration of OM instruments Drivers are available for free on our website	ISOLATED USB > RS TRANSMITTER OM USB-RS II Provides galvanic separation of USB bus and output lines RS 232/485 Drivers are available for free on our website	USB ISOLATOR OM LINK-USB II Full Speed isolator of USB line Without installing drivers	
FUNCTION		USB 2.0	USB 2.0	USB 2.0	
GALVANIC ISOLATION		2,5 kVAC	2,5 kVAC	4 kVAC	
COMPARATORS					
ANALOGUE OUTPUT					
DATA OUTPUT		RS 232 OM ASCII	RS 232/RS 485	USB 2.0 Output current <200mA	
EXCITATION					
POWER SUPPLY		5 VDC/100 mA from USB and OM instrument	5 VDC/100 mA from USB	5VDC/250 mA from USB	
DIMENSIONS/PANEL CUTOUT	96 x 48mm/90,5 x 45 mm	50 x 24 x 14mm	50 x 24 x 14mm	50 x 24 x 14mm	
DEPTH BEHIND THE PANEL	120 mm				
COVER	IP 40				



OM Link

PROGRAM FOR OM INSTRUMENTS

OM Link

The OM Link program is designed for easy configuration, operation, firm-ware upgrade of instruments and converters, and for visualization of the measuring process.

For connection to PC via USB the OM LINK-USB II transmitter is required. Lately manufactured OM instruments already feature a USB connector.

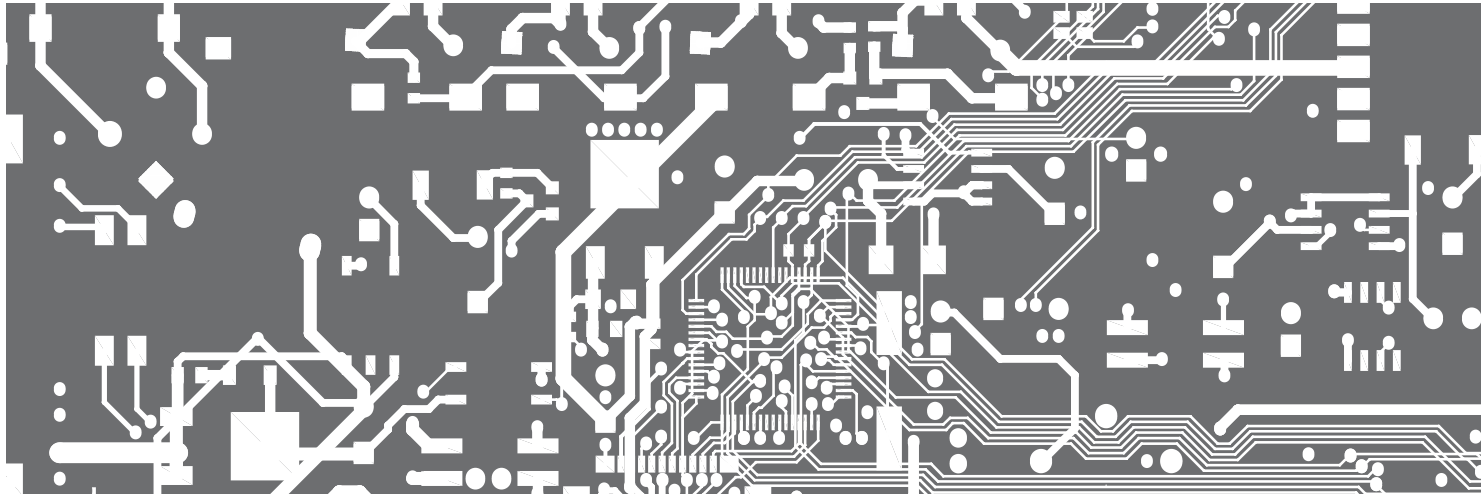
Connection is also possible via data output RS 232 or RS 485 (if these outputs are part of the instrument).

OM Link - Basic

The program is intended for only one instrument. It is designed for on-line configuration or data collection via RS 485 line. Free download of the program is available on our website.

OM Link - Full

This paid program is designed for on-line configuration or data collection via RS 485 line for unlimited number of connected OM instruments.



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