

DESCRIPTION

DIGITAL INDICATOR for operating as an industrial visualizer or repeater controled through RS485 network and **MODBUS RTU** and **ASCII** communications protocols.

5-digit indicator with **14mm** digit height, it has 6 adjustable display brightness levels and is also configurable in 3 colors.

AC/DC power supply for a wide range of voltages and fully programmable through 3 frontal keys.

The **MICRA-X** is compatible with industrial applications that run over a RS485 network in half-duplex mode to display data from other instruments of KOSMOS series, that have RS485 output, or any other device that supports the standard MODBUS RTU or proprietary ASCII protocols.

The indicator can be configured to work as a MASTER or SLAVE.

Programmed as "**MASTER**" the instrument requests to other device, at configurable time intervals, the variable to visualize.

Using MODBUS protocol and connected to a KOSMOS series indicators, also provides automatic device detection and preconfigured MODBUS addresses for visualizing 4 of the most common variables. To communicate with other devices or for a different variable, the address must be manually entered in each case. In both cases, data can be displayed in decimal format or hexadecimal format (divided in 2 or 4 parts) and with configurable decimal point.



Using ASCII protocol and connected to KOSMOS series indicators, it is possible to directly choose 4 commands that allow to visualize the most common variables. For the rest of devices or for a different command, command code must be manually configured.

Programmed as "**SLAVE**", the instrument operates under other device requests displaying received data from that one until a new message reception.

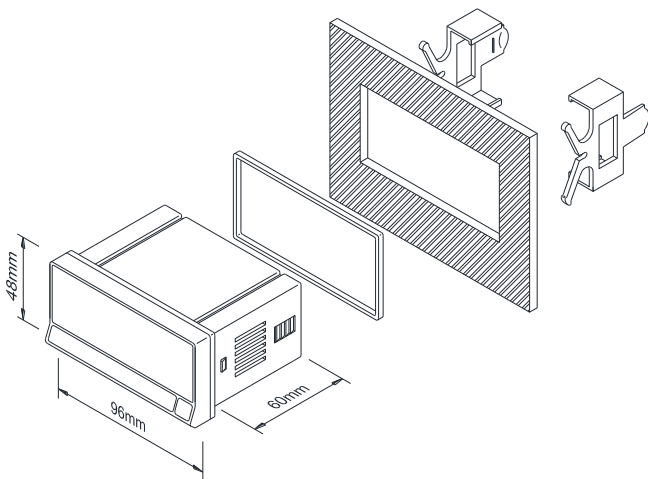
Using MODBUS protocol supports functions of read n words, write n words, write one word and force coil (to change brightness level and color), displaying numeric variables in ASCII, WORD or FLOAT format, or up to 5-character ASCII messages with a decimal point.

Using ASCII protocol allows to write from a master an up to 5-character ASCII message with a decimal point according to defined format protocol.

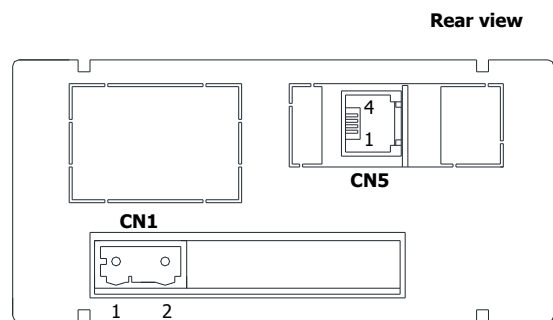
DIMENSIONS AND MOUNTING

Dimensions 96 x 48 x 60 mm (1/8 DIN).
 Panel cutout 92 x 45 mm.
 Weight 160g.
 Case material UL 94 V-0 polycarbonate

Instruments include a sealing gasket and 2 fixing clips for frontal and rear panel installation.



CONNECTIONS



CN1		POWER SUPPLY	
1		V AC / V DC	
2		V AC / V DC	
CN5		RS485	
PIN	NAME	DESCRIPTION	
1	N.C.	Not conected	
2	B	TxD+ / RxD+	
3	A	TxD- / RxD-	
4	GND	GND	

ORDERING CODES

MICRA-X: 85-265V AC 50/60Hz and 100-300V DC
MICRA-X6: 22-53V AC 50/60Hz and 10.5-70V DC

TECHNICAL SPECIFICATIONS

SPECIAL FUNCTIONS

Return to factory configuration.

POWER SUPPLY

MICRA-X: 80-265 V AC 50/60 Hz and 100-300 V DC

MICRA-X6: 22-53 V DC 50/60 Hz and 10.5-70 V DC
Consumption (both models) 5W

FUSES (DIN 41661) (not included)

MICRA-X: F0.5A / 250V

MICRA-X6: F2A / 250V

DISPLAY

Type 5 digits 14mm, RED LED

Numeric display range -99999÷99999

Supported ASCII characters 74

Decimal point Configurable / automatic

LEDs 4

Amber (permanent) Network linked

Green (flashing) Network activity

Red 2 for indications (depending on application)

Reading interval (as MASTER) 0.1s to 9.9s (configurable)

Data absence indication "-.---"

Positive display overrange indication:
(in WORD and FLOAT modes) "OUEr"

Negative display overrange indication:
(in WORD and FLOAT modes) "-OUEr"

NET INTERFACE

Interface RS485 half-duplex

Protocols MODBUS RTU, ASCII

Connector RJ11

ENVIRONMENTAL CONDITIONS

Operating temperature -10°C ÷ +60°C

Storage temperature -25°C ÷ +85°C

Relative humidity (non-condensing) <95% @ 40°C

Maximum altitude 2000m

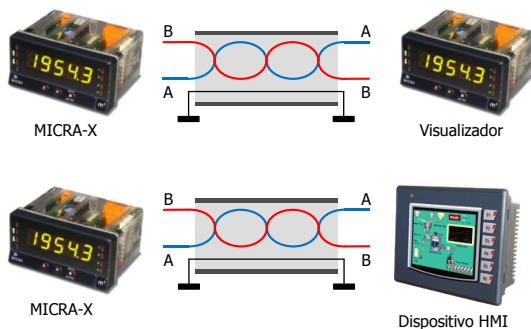
Frontal protection degree IP65

TABLE OF SUPPORTED ASCII-HEXADECIMAL CHARACTERS

20 (space)	39 9	4C L	59 Y	69 ,	76 v
2B -	3D -	4D n	5A 2	6A J	77 B
2D -	41 A	4E n	5B C	6B H	77 H
2E .	42 B	4F O	5D J	6C L	79 Y
30 0	43 C	50 P	5F -	6D n	7A 2
31 1	44 O	51 9	61 d	6E n	7C 1
32 2	45 E	52 r	62 b	6F o	DC o
33 3	46 F	53 S	63 c	70 P	DF o
34 4	47 G	54 r	64 d	71 9	F0 =
35 5	48 H	55 U	65 E	72 r	
36 6	49 I	56 U	66 F	73 S	
37 7	4A J	57 B	67 9	74 t	
38 8	4B H	58 H	68 h	75 v	

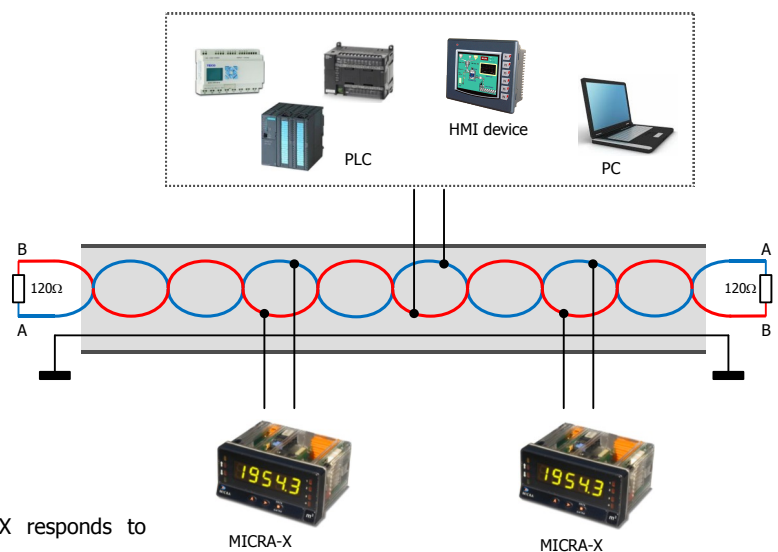
OPERATION SAMPLES

MASTER Configuration



In "MASTER" mode the MICRA-X makes reading requests.

SLAVE configuration



In "SLAVE" mode, the MICRA-X responds to write, read or force coil commands.