



CM78 MICROPROCESSOR MULTIFUNCTION COUNTER/VISUALISER

- 6 displayed digits
 - 2 settable presets
 - supply 115 or 230 or 24Vac, 50/60Hz or 24 Vdc (types H1 and H2 only) - to be defined in the order
 - functioning modes are freely settable by the user: decimal point position, correcting factor of the input pulses
 - for counters only: single or repeat cycle, up- or down-counter, steady or timed outputs
- H1:** on/off output **H2:** $\pm 10V$ differential analog output **H3:** on/off output and analog input
- Dimensions: mm 96x48 Dept: **H1** mm 105 **H2-H3** mm 138

Hardware	Softw.	Functions
Counter Versions		
CM78H1N	S001N	Two settable presets counter
CM78H1N	S006N	Like S001 with correcting factor ranging from 0.1 to 9.99999 sec.
CM78H1	S008	Counter with total/partial functioning mode
CM78H1	S013	2-preset counter - preset 1 enabled by input
CM78H1	S020	Microprocessor counter with partial/total function
CM78H1X12	S026	Preset counter with deceleration and stop outputs, possibility to be coupled to a cycle counter - Always with HDW version X12*
CM78H1X29	S027	1-preset counter with relay output and switch contact
CM78H1X12	S032	Preset counter like S026 with setup under key- HDW versX12*
CM78H1	S041	Counter like S006 with parameter P2 under key
Visualiser Versions		
CM78H1N	S002N	Two settable thresholds visualizer
CM78H1	S004	Two settable thresholds visualizer with optical scale zero pulse manager
CM78H1	S005	Two settable thresholds visualizer with encoder zero pulse manager
CM78H1N	S007N	Like S002 with correcting factor ranging from 0.1 to 9.99999 sec.
CM78H1N	S012N	Preset measure visualizer with correcting factor and LOAD input by keyboard or input
CM78H1	S017	Visualizer - absolute/relative from keyboard - unit from the input signal - 2 settable thresholds
CM78H1N	S018N	Preset measure visualizer like S012 with correcting factor range 0.1 to 9.99999
CM78H1	S022	Display of degrees and tenths, input by bidir.encoder 900 ppr
CM78H1	S028	Preset measure visualiser with blade thickness, load, mm/inch
CM78H1	S030	Visualiser like S002 with reset from keyboard
CM78H1	S031	Visualiser like S002 with correcting factor range 0.1÷9.99999 and load from keyboard
CM78H1	S034	Visualiser like S017 with front load
CM78H1	S035	Visualiser with dividing factor by 10/100/1000
CM78H1	S040	Visualiser with two settable thresholds + learning and stroke limiters
CM78H1	S042	Visualiser like S007 with parameter P2 under key
Tachometer Versions		
CM78H1	S019	Microprocessor tachometer with settable time base; indication of the ration between two speeds
CM78H1	S021	Double tachometer, percent slip between 2 speeds, 2 settable thresholds on the ratio between 2 speeds, possibility to disable the min.threshold
CM78H1	S023	Microprocessor tachometer with possibility to select working with indication V1 or V2 or ratio V2/V1 or percentage shift. Two thresholds on the displayed selection with relay outputs.
CM78H1	S045	Like S023 with display block
Tachometer for Low Frequencies		
CM78H1X24	S048	Pulses/minute speed indicator with correcting factor for the out-of-range calibration, without thresholds
CM78H1	S049	Pulses/minute speed indicator with correcting factor for the out-of-range calibration, with two thresholds



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Specifications: see page 1

Hardware	Softw.	Functions
Digital Potentiometer		
CM78H2*	S025	Displayed digital potentiometer with two settable thresholds, analog output 0/10V or $\pm 10V$
Visualisers with analog input		
CM78H3*	S014	Visualizer with two settable thresholds and analog input (potentiometric transducer, voltage, currents)
CM78H3*	S016	Like S014, but stroke limiters are not modified by the display range variation
CM78H3*	S047	Relative/absolute display with two settable thresholds

*CM78 H2/H3: Running out of product – only supplied as spare part

CM78 RX/R5 MICROPROCESSOR COUNTER/VISUALISER WITH SERIAL TRANSMISSION

Like **CM78** with serial transmission **RS232** (code RX) or **RS485** (code R5)

Hardware	Softw.	Functions
CM78H1RX	S003	Like S001 with RS232 serial interface equipped with flying 9-pin plug
CM78H1RX	S009	Like S002 with RS232 serial interface equipped with flying 9-pin plug
CM78H1RX	S010	Like S003 with instrument code manager to connect point to point to other instruments
CM78H1RX	S011	Like S009 with instrument code manager to connect point to point to other instruments
CM78H1RX	S024	Two preset counter with count reading/reset + set/reading of preset 1 and 2 via RS232
CM78H1RX	S029*	Tachometer/indicator of the ratio between two speeds with RS232 to transmit the displayed value to external units
CM78H1RX	S039*	Partial/total counter with serial transmission RS232
CM78H3RX-X21	S046	Display with analog input (potentiometer, current). Value reading/transmission via RS232 or external contact. Code manager to connect point to point to other instruments
CM78H1R5	S036	Like S010 with serial line RS485
CM78H1R5	S037	Like S011 with serial line RS485
CM78H1R5	S038	Like S024 with serial line RS485
CM78H1R5	S043	Like S009 with serial line RS485
CM78H1R5	S044	Like S003 with serial line RS485

Program which can be converted for serial line RS45. Delivery term: 10 days from order

CM78/CM79 SPECIAL VERSIONS

Id.	Description
X01	Inputs 11 and 12 by micro-switch
X02	Input by PNP monodirectional signal
X03	Inputs 11 and 12 by micro-switch, output of the second preset normally closed
X04	Output of the second preset normally closed
X05	Normally closed NPN solid state outputs
X06	Output of the first preset normally closed
X08	Inputs 11 and 12 by PNP signal
X09	5V supply to encoder and inputs 11 and 12
X10	Normally closed output contacts
X11	Inputs 11, 12 and 13 programmable by dip-switch, NPN or PNP with different frequency, input by micro-switch. Not to be used with RS232/RS485 serial transmission
⁽¹⁾ X12	3 auxiliary inputs (for program S026)
X13	One fast input. FOR HDW VERSION H2 ONLY
X14	Zero output – for CM79 ONLY
X15	Input by signal PNP monodirectional (like X11 with fixed setting)
X16	Solid state PNP outputs
X17	Inputs 11 and 12 by micro-switch, output of the 1 st preset normally closed
X18	Input by NAMUR inductor (for program A055)
X19	NPN solid state outputS
X20	Count by FG12R for connection in parallel of 2 units CM78
X21	H3 with auxiliary input
X22	H1 with mono or bidirectional count by FG12R (1 or 2 photo-forks)
X23	Input by bifilar inductor
⁽²⁾ X24	Period meter without relays (for software S048 only)
X25	Like X13 + PNP count input (for hardware H2 only)
X26	Version H3 with 2 summing analog inputs
X27	Inputs 9 and 10 by PNP signal
X28	Inputs 11 and 12 by PNP signal 24 Vdc
X29	Relay RL1 only, switch output contact
X31	Version X29 + version X08
A4	Supply 24 Vdc – Not available for type H3
A5	Supply 12 Vdc

⁽¹⁾ necessary for software version S026 and S032

⁽²⁾ necessary for software version S048

REMARK: some of the above mentioned hardware modification cannot be applied to type CM78H1N: please, always contact our Technical Department when a special version is required.