

Product overview

Digital indicators for panel-mounting, wall-mounting and top hat rail mounting



Fig.: Type **TFT1-13** in 96x48mm (WxH)
with TFT-display for the metering of 3 direct voltage/direct current signals



Fig.: Type **MH-1U** digital indicator
for tophat rail mounting with
multi-function measuring input



Fig.: Type **MG-AU**
Large-size indicator with 100 mm digit height for wall-mounting

Our indicator ranges offer amongst others:

- devices for standard measuring inputs: V, A, mA, mV, Pt100(0), Potentiometer, DMS, Thermocouple, Frequency, Resistance or AC current / AC voltage
- devices with multi-function measuring input: V, A, mA, mV, Pt100(0), Thermocouple, Frequency, Rotational speed, Counter
- devices for top hat rail mounting
- current loop indicators
- bargraph indicators
- devices for two-channel metering
- Profibus devices
- setpoint devices
- wall-mounting devices and enclosures
- large-size indicators
- adapter for assembly in different kind of panel cut-outs
- TFT, LCD and LED displays
- display colours: red, green, orange, blue or tricolour (red-green-orange reversible)
- available in current assembly dimensions: 96x96, 96x48, 96x24, 72x36 and 48x24 mm (with adapter suitable for 144x72, 72x24 and 48x48 mm, too)

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Multi-functional measuring inputs: Voltage, Current, Shunt, Pt100(0), Thermocouple, Frequency

Product overview - clear overview of product ranges M1, M2 and M3

Product overview - clear overview of product ranges TFT, MH-1U and MG - see last page

Multi-function measuring indicators

Measuring inputs: Voltage, Current, Shunt, Pt100(0), Thermocouple, Frequency, Rotational speed, Counter



Type ML2-2UX4C.000X.S70AD (standard type)
LCD display - 96x96x82 mm (WxHxD)

- wide-range power supply 100-240 VAC/DC or 10-40 VDC/18-30 VAC
- full-graphic LCD display with 128x64 pixel
- measurement presentation from -1999...9999 digits
- multicolour background lighting (7 colours are available)
- indication of metering point and signal description
- 3-digit, adjustable dimension sign
- adjustment of metering point (with helptext in ticker mode)
- min/max memory
- tara function
- 9-points-linearisation
- sum alarm with shiftable confirmation function
- colour change at threshold value exceedance or undercut
- programming interlock via access code
- pluggable screw terminal
- optional: sensor supply including digital input
- optional: analog output 0/4-20 mA, 0-10 VDC switchable
- optional: 2 relay outputs
- optional: RS232/RS485 interface (ModBus protocol) galvanic isolated
- PC-based configuration kit PM-TOOL with CD & USB adapter



Type TFT1-11U.000X.572A (standard type) **NEW**
TFT display - 96x48x47 mm (WxHxD)

- supply 230 VAC or 24 VDC galv. isolated
- measurement presentation from -1999...9999 digits
- digit height approx. 15 mm
- selectable colours for measurand and background (red, green, white, black, orange)
- indication of metering point and signal description
- adjustable dimension sign
- min/max value recording
- 9 adjustable supporting points
- display flashing at threshold value exceedance/undercut
- tara function
- programming interlock via access code
- pluggable screw terminal
- protection class IP65 at the front
- 2 switching points (Wechsler)
- optional: RS232/RS485 interface (ModBus protocol) galv. isolated
- PC-based configuration kit PM-TOOL with CD & USB adapter



Type TFT2-11U.000X.570A (standard type) **NEW**
TFT display - 96x48x47 mm (WxHxD)

- supply 100-240 VAC or 15-44 VDC galv. isolated
- measurement presentation from -1999...9999 Digits
- digit height approx. 15 mm
- selectable colours for measurand and background (red, green, white, black, orange)
- indication of metering point and signal description
- adjustable dimension sign
- min/max value recording
- 9 adjustable supporting points
- display flashing at threshold value exceedance/undercut
- tara function
- programming interlock via access code
- pluggable screw terminal
- protection class IP65 at the front
- optional: analog output 0-10 VDC, 0/4-20 mA switchable
- optional: RS232/RS485 interface with Modbus protocol
- optional: sensor supply incl. digital input
- optional: 2 or 4 relay outputs (changer)
- optional: Bluetooth interface (in preparation)
- optional: data logger (in preparation)
- PC-based configuration kit PM-TOOL with CD & USB adapter

Multi-functional measuring indicators

Measuring inputs: Voltage, Current, Shunt, Pt100(0), Thermocouple, Frequency



Type MH-1UR3A.000X.760A (standard type) **NEW** LED display for top hat rail mounting - 22,5x117,2 mm (WxH)

- wide-range power supply 100-240 VAC/DC or 10-40 VDC/18-30 VAC or 24 VDC
- red display from -199...999 digits
- digit height approx. 7 mm
- min/max value recording
- 9 adjustable supporting points
- display flashing at threshold value exceedance/undercut
- tara function
- programming interlock via access code
- pluggable screw terminal
- optional: sensor supply incl. digital input
- optional: analog output 0-10 VDC, 0/4-20 mA switchable
- optional: 2 relay outputs **or** 2 PhotoMos outputs
- optional: 2 relay outputs **and** 2 PhotoMos outputs
- optional: interface RS232 / RS485 (Modbus protocol) / Bluetooth
- optional: data logger (in preparation)
- PC-based configuration kit PM-TOOL with CD & USB adapter



Fig.: indicator in housing size 48x24 mm

Type M1-7UR4A.000X.372AD (standard type) LED display - 48x24x67 mm (WxHxD) further housing sizes: 96x48x45 (WxHxD)

- power supply 24 VDC galv. not isolated (**48x24 mm**)
- supply: 230 VAC or 24 VDC galv. isolated (**96x48 mm**)
- red display (optional green, orange or blue)
- measurement presentation from -1999...9999 digits
- digit height 10 mm (48x24 mm), 14 mm (96x48 mm)
- min/max value recording
- adjustable supporting points
- display flashing at threshold value exceedance/undercut
- tara function
- 2 semiconductor switchpoints, galv. not isolated (only in 48x24 mm)
- programming interlock via access code
- protection class IP65 at the front
- pluggable screw terminal
- accessories: PC-based configuration kit PM-TOOL with CD & USB adapter



Type Typ PU5.030X.S70D (standard type) LED display - 96x48x139 mm (WxHxD)

- wide-range power supply 100-240 VAC/DC or 10-40 VDC/18-30 VAC
- red display
- measurement presentation from -19999...99999 digits
- digit height 14 mm
- min/max memory with adjustable permanent-presentation
- 24 Bit transformer resolution, up to 50 measurements/sec
- indicator adjustment via factory presetting or directly at the sensor signal
- 30 additional, adjustable supporting points
- permanent line break surveillance
- high longterm and temperature stability
- display flashing at threshold value exceedance/undercut
- volume metering (totalisator)
- zero-key for the triggering of Hold, Tara
- flexible alarm system with adjustable delay time
- galvanic isolated digital input for the triggering of Hold, Tara
- sensor supply
- programming interlock via access code
- protection class IP65 at the front
- pluggable screw terminal
- optional: 2 or 4 relay outputs
- optional: analog output 0-10 VDC, 0/4-20 mA switchable
- optional: interface RS232 / RS485 (ASCII protocol)
- accessories: PC-based configuration kit PM-TOOL with CD & USB adapter
- ATTENTION: indicator without frequency input!

Panel-mounting indicators - 4-digit

Measuring inputs: Voltage, Current, Shunt, Potentiometer, Resistance, Pt100(0), Thermocouple



Type TFT1-13V.0001.570A (standard type) **NEW** triple TFT display - 96x48x47 mm (WxHxD)

- measuring input each 3x 0/4-20 mA, 0-10 VDC
- supply: 230 VAC or 24 VDC galv. isolated
- 3x measurement presentation from -1999...9999 Digits
- digit height approx. 9 mm
- selectable colours for measurand and background (red, green, white, black, orange)
- indication of metering point and signal description
- adjustable dimension signs
- min/max value recording
- 9 adjustable supporting points
- display flashing at threshold value recording/undercut
- tara function
- programming interlock via access code
- pluggable screw terminal
- protection class IP65 at the front
- optional: 2 switching points (changeover contacts)
- optional: RS485 interface with ModBus protocol
- accessories: PC-based configuration kit PM-TOOL with CD & USB adapter



Type M1-1VT4.0001.772CD (standard type) LED display - tricolour - 96x48x45 mm (WxHxD)

- measuring input 0/4-20 mA, 0-10 VDC
- power supply 24 VDC galvanic isolated
- **tricolour** - display from -1999...9999 digits (red-green-orange switchable)
- digit height approx. 14 mm
- min/max value recording
- adjustable supporting points
- display flashing at threshold value exceedance/undercut
- tara function
- programming interlock via access code
- pluggable screw terminal
- protection class IP65 at the front
- 2 switching points
- on request: devices for working temperatures of -40°C...+70°C
- accessories: PC-based configuration kit PM-TOOL with CD & USB adapter



Type M1-1VR4B.0001.570DD (standard type) LED display - 96x48x40 mm (WxHxD) further housing sizes: 96x24x76 mm, 72x36x97 mm, 48x24x56 mm (WxHxD)

Measuring input:

- Type M1-1VR4B.0001.570CD: **0/4-20 mA, 0-10 VDC**
- Type M1-1VR4B.0002.570CD: **Shunt**
- Type M1-1VR4B.0005.570CD: **Poti**
- Type M1-1VR4B.0506.570CD: **Resistance**
- Type M1-1TR4B.030C.570CD: **Pt100**
- Type M1-1TR4B.040X.570CD: **Thermocouple**
- power supply 230 VAC or 24 VDC galv. isolated (48x24 mm only 24 VDC)
- red display from -1999...9999 digits (optional green, orange or blue)
- digit height approx. 14 mm (96x48, 96x24, 72x36 mm), 10 mm (48x24 mm)
- min/max value recording
- adjustable supporting points
- display flashing at threshold value exceedance/undercut
- tara function
- programming interlock via access code
- pluggable screw terminal
- protection class IP65 at the front
- optional: 2 switching points (only in housing size 72x36 mm)
- on request: devices for working temperatures of -40°C...+70°C
- accessories: PC-based configuration kit PM-TOOL with CD & USB adapter

Fig.: indicator in housing size 96x48 mm

Panel-mounting indicators - 4-digit

Measuring inputs: Voltage, Current, Shunt, Potentiometer, Resistance, Pt100(0), Thermocouple

Type M2-2VR4C.0301.572AD (standard type)
LED display - 96x96x75 mm (WxHxD)



- Measuring input 0/4-20 mA, 0-10 VDC
- Power supply 230 VAC
- red display
- measurement presentation from -999...9999 digits
- digit height 20 mm
- min/max value recording
- 10 adjustable supporting points
- tara / hold function
- protection class IP65 at the front
- pluggable screw terminal
- sensor supply
- 2 relay outputs

Panel-mounting indicators - 5-digit

Measuring inputs: Voltage, Current, Shunt, Potentiometer, Resistance, Pt100(0), Thermocouple, Frequency, Strain gauges, Weighing technology

Type M2-1VR5B.0001.570CD (standard type)
LED display - 96x48x89 mm (WxHxD)



Measuring inputs

- Type M2-1VR5B.0001.570CD: **0/4-20 mA, 0-10 VDC, high voltage up to 600 VDC**
- Type M2-1VR5B.0002.570CD: **Shunt**
- Type M2-1VR5B.0005.570CD: **Potentiometer**
- Type M2-1VR5B.0006.570CD: **Resistance**
- Type M2-1TR5B.010C.570CD: **Pt100**
- Type M2-1TR5B.040X.570CD: **Thermocouple**
- Type M2-1FR5B.0307.570CD: **Frequency**
- Type M2-1MR5B.020X.570CD: **Strain gauges with 80% calibration**
- Type M2-1WR5B.020X.570CD: **Weighing technology**
- Type M2-1VR5B.0004.570CD: **10 VAC, 50 VAC, 1 AAC, 5 AAC, high voltage up to 600 VAC**
- power supply 230 VAC or 10-30 VDC galv. isolated
- red display (optional green, blue, orange or tricolour)
- measurement presentation from -19999...99999 digits
- digit heights 14 mm
- display adjustment via factory presetting or directly on the sensor signal
- min/max memory with adjustable permanent presentation
- 30 additional adjustable supporting points
- display flashing at threshold value exceedance/untercut
- zero-key for the triggering of hold, tara, display change, setpoint setting or alarm activator
- flexible alarm system with adjustable delay times
- volume metering (totalisator)
- presetting of a constant / setpoint setting
- flexible average determination
- mathematic functions like reciprocal value, root extraction, squaring
- brightness control via parameter or front keys
- programming interlock via access code
- protection classe IP65 at the front
- pluggable screw terminal
- optional: 2 relay outputs
- optional: sensor supply incl. digital input
or 1 independently scalable analog output
- accessories: PC-based configuration kit PM-TOOL with CD & USB adapter
- on request: devices for working temperatures of -20°C...60°C or -40°C...70°C

Panel-mounting indicators - 5-digit

Measuring inputs: Voltage, Current, Shunt, Potentiometer, Resistance, Pt100(0), Thermocouple, Frequency, Strain gauges, Weighing technology

Type M3-1VR5B.0001.S70BD (standard type)

LED display - 96x48x139 mm (WxHxD)

further housing sizes: 96x24x145 mm, 48x24x109 mm (WxHxD)



Fig.: indicator in housing size 96x48 mm

Measuring input:

- Type M3-1VR5B.0001.S70BD: **0/4-20 mA, 0-10 VDC, high voltage up to 600 VDC**
- Type M3-1VR5B.0002.S70BD: **Shunt**
- Type M3-1VR5B.0005.S70BD: **Potentiometer**
- Type M3-1VR5B.0006.S70BD: **Resistance**
- Type M3-1TR5B.030C.S70BD: **Pt100**
- Type M3-1TR5B.040X.S70BD: **Thermocouple**
- Type M3-1FR5B.0307.S70BD: **Frequency**
- Type M3-1MR5B.020X.S70BD: **Strain gauges with 80% calibration (only in 96x48)**
- Type M3-1WR5B.020X.S70BD: **Weighing technology (only in 96x48)**
- Type M3-1VR5B.0004.S70BD: **10 VAC, 50 VAC, 1 AAC, 5 AAC, high voltage up to 600 VAC**
- wide-range power supply 100-240 VAC/DC or 10-40 VDC/18-30 VAC, 24 VDC galv. isolated (only in 48x24 mm)
- red display from -19999...99999 digits (optional green, orange, blue or tricolour)
- digit height approx. 14 mm (96x48, 96x24 mm), 10 mm (48x24 mm)
- display adjustment via factory presetting or directly on the sensor signal
- min/max memory with adjustable permanent presentation
- 30 additional adjustable supporting points
- display flashing at threshold value exceedance/undercut
- zero-key for the triggering of hold, tara, display change, setpoint setting or alarm activator
- flexible alarm system with adjustable delay time
- volume metering (totalisator)
- constant presetting / setpoint setting
- flexible average determination
- mathematic functions like reciprocal value, root extraction, squaring
- brightness control via parameter or front keys
- programming interlock via access code
- pluggable screw terminal
- protection class IP65 at the front
- optional: 2 or 4 relay outputs or 8 PhotoMos outputs
- optional: sensor supply incl. digital input
- optional: up to 2 independently scalable analog outputs
- optional: interface RS232 or RS485 (Modbus protocol)
- on request: devices for working temperatures of -20°C...60°C or -40°C...+70°C
- accessories: PC-based configuration kit PM-TOOL with CD & USB adapter
- **ATTENTION! Options are not available for all housing sizes!**

Current loop indicator - 4-digit

Measuring input: 4-20 mA

Type M1-1SR4B.0001.K70BD (standard type)

LED display - 96x48x139 mm (WxHxD)

further housing sizes: 96x24x65 mm, 72x36x40 mm, 48x24x56 mm (WxHxD)



Fig.: indicator in housing size 96x24 mm

- supply via current loop
- red display from -1999...9999 sigits
- digit height approx. 14 mm (96x48, 96x24, 72x36 mm), 10 mm (48x24 mm)
- min/max value recording
- adjustable supporting points
- display flashing at threshold value exceedance/undercut
- tara function
- programming interlock via access code
- pluggable screw terminal
- protection class IP65 at the front
- optional: 2 switching points (not for housing size 48x24 mm)
- on request: indicators for working temperatures of -40°C...+70°C
- accessories: PC-based configuration skit PM-TOOL with CD & USB adapter

Bargraph indicators

Measuring inputs: Voltage, Current, Frequency (only in housing size 96x96)

Type MB1-33RVO.0001.770BD (standard type) LED display - 96x24x75 mm (WxHxD)



- measuring input **0/4-20 mA, 0-10 VDC**
- power supply 24 VDC galv. isolated, 230 VAC
- 30-points-bargraph
- colour: red (optional green, orange or blue)
- alignment: horizontal or vertical
- parameterisation via HEX-switch and keys
- factory setting: preset input for standard signals 0...10 V and 0/4...20 mA
- 8 different presentation types are adjustable: bars, dot or curtain
- free choice of direction and indication of the middle (e.g. bars starting from the middle)
- gradually brightness control
- protection class IP65 at the front
- pluggable screw terminal

Type MB3-3VT3VR.0001.S70BD (standard type) LED display - 96x24x144 mm (WxHxD)



- measuring input **0/4-20 mA, 0-10 VDC**
- wide-range power supply 100-240 VAC/DC, 10-40 VDC galv. isolated / 18-30 VAC
- 30-points-bargraph, tricolour (red-green-orange switchable)
- red display from -199...999 Digits
- digit height 8 mm, optional green display
- adjustable bars or dot operation mode
 - or operation with permanent midpoint presentation
- display adjustment via factory setting or directly on the sensor signal
- min/max memory with adjustable permanent presentation
- 30 additional adjustable supporting points
- display flashing at threshold value exceedance/undercut
- zero-key for triggering of hold, tara, display change, setpoint setting or alarm activator
- flexible alarm system with adjustable delay times
- volume metering (totalisator)
- flexible average determination
- mathematic functions like reciprocal value, square root, squaring and rounding
- programming interlock via access code
- protection class IP65 at the front
- pluggable screw terminal
- optional: 1 or 2 relay outputs
- optional: sensor supply incl. digital input
- optional: 1 independently scalable analog output
- optional: interface RS232 or RS485 (Modbus protocol)
- accessories: PC-based configuration kit PM-TOOL with CD and USB adapter
- on request: indicators for working temperatures of -40°C...70°C

Type MB2-2VR5RR.0001.S72AD (standard type) LED display - 96x96x144 mm (WxHxD) / 5-digit with 270° bargraph



- Type MB2-2VR5RR.0001.S72AD: **0/4-20 mA, 0-10 VDC**
- Type MB2-2FR5RR.0307.S72AD: **Frequency**
- wide-range power supply 100-240 VAC/DC, 10-40 VDC galv. isolated / 18-30 VAC
- 55-points-bargraph, red
- red display from -19999...99999 digits
- digit height 14 mm
- adjustable bars or dot operating mode
 - or operating mode with permanent midpoint indication
- display adjustment via factory setting or directly at the sensor signal
- min/max memory with adjustable permanent presentation
- 30 additional adjustable supporting points
- display flashing at threshold value exceedance/undercut
- zero-key for the triggering of hold, tara, display change, setpoint setting or alarm activator
- flexible alarm system with adjustable delay times
- volume metering (totalisator)
- flexible average determination
- mathematic functions like reciprocal value, square root, squaring and rounding
- programming interlock via access code
- protection class IP65 at the front
- pluggable screw terminal
- optional: 1 or 2 relay outputs
- optional: sensor supply incl. digital input
- optional: 1 independently scalable analog output
- optional: RS232/RS485 interface (Modbus protocol)
- accessories: PC-based configuration kit PM-TOOL with CD & USB adapter

Panel-mounting indicators for two-channel metering - 5-digit

Measuring inputs: 2x Voltage, Current



Type PZ5.0301.1S70D (standard type)

Arithmetic function like e.g. differential measurement
LED display - 5-digit - 96x48x139 mm (WxHxD)

- measuring input: each 2x 0/4-20 mA, 0-10 VDC
- wide-range power supply 100-240 VAC/DC or 10-40 VDC/18-30 VAC
- red display from -9999...99999 digits
- digit heights 14 mm
- 24 bit transformer resolution
- up to 100 measurements/sec respectively 50 measurements/sec on two channels
- display adjustment via factory settings or directly on the sensor signal
- min/max memory with adjustable permanent indication
- 30 additional adjustable supporting points
- permanent line break surveillance
- high longterm and temperature stability
- display flashing at threshold value exceedance/undercut
- volume metering (totalisator)
- zero-key for the triggering of hold, tara
- flexible alarm system with adjustable delay times
- galvanic isolated digital input for the triggering of Hold, Tara
- sensor supply
- programming interlock via access code
- protection class IP65 at the front
- pluggable screw terminal
- optional: 2 or 4 relay outputs
- optional: analog output 0-10 VDC, 0/4-20 mA switchable
- optional: RS232 or RS485 interface ASCII protocol
- PC-based configuration kit PM-TOOL with CD & USB adapter

Interface indicators - Profibus - 6-digit

Measuring input: Profibus DP



Type M2-BR6B.9000.570CD (standard type)

Profibus indicator
LED display - 6-digit - 96x48x89 mm (WxHxD)

- power supply 230 VAC or 10-30 VDC galv. isolated
- red display from -19999...999999 digits (optional green or orange display)
- measuring input: Profibus DP
- autobaud recognition up to 12 Mbit/s
- adjustable address via keypad
- control as 16 bit int/uint or 32 bit int/uint
- brightness levels can be controlled or adjusted via bus
- digit flashing can be controlled via bus
- placing of the decimal point can be controlled or adjusted via bus
- protection class IP65 at the front
- pluggable screw terminal

Setpoint generator

Output: 0/4-20 mA, 0-10 VDC

Type M2-1GR5B.0X00.570CD (standard type)
LED display - 96x48x89 mm (WxHxD)
further housing size: 48x24x109 mm



Fig.: indicator in housing size 96x48 mm

- power supply 230 VAC oder 10-30 VDC galv. isolated, 24 VDC galv. isolated (48x24)
- measurement indication from -19999...99999
- colour: red (optional green, orange or blue)
- digit height 14 mm (96x48 mm), 10 mm (48x24 mm)
- definable adjustment range for the setpoint value
- configurable output area between 0-10 V or 0/4-20 mA
- adjustable increment per keystroke
- display flashing at threshold value exceedance/undercut
- digital inputs for keylocks or external adjustment buttons
- zero-key for a quick recall of a default value
- configurable code protects the setpoint value from unintentional adjustments
- different operating types for setpoint value adjustment
- start performance with latest setting value or default value
- speed levels for the adjustment of the setpoint value
- fast reaction at the adjustment of the setpoint value (ramp function)
- programming interlock via access code
- protection class IP65 at the front
- pluggable screw terminal
- optional: 2 relay outputs (only for devices in 96x48mm)
- accessories: PC-based configuration kit PM-TOOL with CD and USB adapter
- on request: indicator for working temperatures of -20°C...60°C or -40°C...70°C

ADAPTER

- the elegant connection for existing panel cut-outs can be combined with digital devices of the M-Line



Material: Aluminium, black anodised
Protection class: IP65
Wall thickness: up to 3 mm

Adapter-8-1

Size 48x48x3mm (WxBxD)
with cut-out for **one** digital indicator in
housing size 48x24mm (WxH)

Adapter-5-1

Size 72x24x3mm (WxHxD)
with cut-out for **one** digital indicator in
housing size 48x24mm (BxH)

Adapter-9-1

Size 72x72x3mm (WxBxD)
with cut-out for **one** digital indicator in
housing size 72x36mm (BxH)

Adapter-2-1

Size 96x96x3mm (WxBxD)
with cut-out for **one** digital indicator in
housing size 96x48mm (WxH)

Adapter-2-2

Size 96x96x3mm (WxBxD)
with cut-out for **two** digital indicators in
housing size 96x24mm (WxH)

Adapter-2-3

Size 96x96x3mm (WxBxD)
with cut-out for **three** digital indicators in
housing size 96x24mm (WxH)

Adapter-4-1

Size 144x72x3mm (WxHxD)
with cut-out for **one** digital indicator in
housing size 96x48mm (WxH)

Adapter-6-1

Size 72x36x3mm (WxHxD)
with cut-out for **one** digital indicator in
housing size 48x24mm (WxH)

Wall mounting indicators

Type AK1-1

Plastic wall mounting enclosure - 160x90x61 mm (WxHxD)
for M1-indicators in housing size 96x48 mm (incl. assembly of the indicator)



- housing size: 160x90x61 mm (WxHxD)
- protection class IP65
- cut-out: 1x 96x48 mm (WxH)
- connection: PG screw connection
- colour: black

Type AKV-2VR4C

Digital indicator in a plastic wall mounting housing - 160x130x60 mm (WxHxD)



- housing size: 160x130x60 mm (WxHxD)
- protection class IP65
- connection: PG screw connection
- colour: black; RAL 9005
- input: 0-10 VDC, 0/4-20 mA
- supply: 230 VAC
- sensor supply 24 VDC / 50 mA
- switching outputs: 2 relay outputs (changer)
- display colour: red
- digit height: 20 mm
- measurement indication from -999...9999 digits
- 10-points-linearisation
- offset presetting
- tara function / hold function

Wall mounting enclosure for panel-mounting indicators of the M-Line (incl. assembly of the indicator)



Type AM - metal wall mounting enclosure

Material: Aluminium, black powder-coated
Protection class: IP65
Fixing: Clamping flanges on the rear side
Connection: 2 PGs on the underside of the enclosure

Type AM1-1M2

for **one** M2-indicator in 96x48 mm
Size: 176x164x82mm (WxBxD)

Type AM2-1-M3 (PU5)

for **one** M3-, PU5- or PZ5-indicator in 96x48 mm
Size: 226x164x82mm (WxBxD)

Type AM2-2-M2

for **two** M2-indicators in 96x48 mm
Size: 226x164x82mm (WxBxD)

Type AM2-3-M1

for **three** M1-indicators in 96x48 mm
Size: 226x164x82mm (WxBxD)

Large-size indicator in wall- or panel-mounting enclosure for Indoor or Outdoor use

Multi-function measuring input: Voltage, Current, Shunt, Pt100(0), Thermocouple, Frequency

Type MG-AUR41.000X.S12AO (standard type)

LED indicator - 4-digit



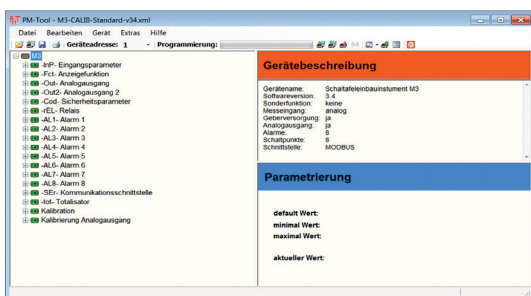
- wide-range power supply 100-240 VAC/DC, 24 VDC galv. isolated
- measurement indication from -1999...9999 digits (optional 6 or 8 digits)
- digit height 57 mm, 100 mm, 200 mm on request
- red display, optional green, blue or orange display
- pressure compensation membrane for ventilation and de-airing
- min/max memory
- 9 adjustable supporting points
- display flashing at threshold value exceedance/undercut
- tara function
- brightness sensor
- programming interlock via access code
- protection class IP65
- 2 switching points (changer)
- optional: fix cable outlet 2 m, 5 m or 10 m
- optional: dimension sign max. 3-digit
- optional: connection via external keypad
- optional: sensor supply incl. digital input
- optional: 1 independently scalable analog output
- optional: panel-mounting enclosure
- optional: with heating for outdoor use
- optional: interface RS485 / RS232 with Modbus protocol
- optional: communication via Bluetooth (on request)
- accessories: PC-based configuration software with CD and USB adapter

Software

Parameterisation software PM-TOOL

Type PM-TOOL

Parameterisation software



With the PM-TOOL configuration software the device lines M1, M2, M3, PM5, PU5, PW5 and PZ5 can be parameterised via a PC. With this tool the device configuration can be generated, readouted and saved on the PC. Due to the easy to handle program surface, the parameter can be changed, whereat the operating mode and the possible options are preset by the program.

Contains the software on CD and one USB cable with device adapter.

The PM-Tool software is a PC software, suitable for system software Windows XP, Windows VISTA or higher and runs under .NET Version ≥ 4.0 . Required is a PC with USB interface.

Product overview - for product lines M1, M2 and M3

Product Line	M1	M2	M3
Installation sizes	96x48 / 96x24 / 72x36 / 48x24 mm	96x48 mm	96x48 / 96x24 / 48x24 mm
Display colours	red, green, yellow, blue, tricolour	red, green, yellow, blue, tricolour	red, green, yellow, blue, tricolour
Display	4-digit, -1999...9999	5-digit, -19999...99999	5-digit, -19999...99999
LED height	10 mm / 14 mm	14 mm	10 mm / 14 mm
Protection class	IP65 at the front, IP00 at the rear side	IP65 at the front, IP00 at the rear side	IP65 at the front, IP00 at the rear side
Input types			
Current loop	4-20 mA available in all 4 housing sizes	-	-
Universal / Multi-function	Current, Voltage, Pt100(0), Thermocouple, Frequency (in housing sizes 48x24 & 96x48)	-	-
Direct voltage / direct current	0...10 VDC / 0/4...20 mA	0...10 VDC / 0/4...20 mA	0...10 VDC / 0/4...20 mA
H-type (H = high voltage)	50 VDC / 100 VDC	600 VDC, 300 VDC, 50 VDC, 1 ADC	600 VDC, 300 VDC, 50 VDC, 1 ADC
Shunt	0...60 mV; 0...150 mV	0...60 mV; 0...150 mV; 300 mV, 1 VDC	0...60 mV; 0...150 mV; 300 mV, 1 VDC
Potentiometer	>1 kOhm ... 1000 kOhm	>1 kOhm ... 1000 kOhm	>1 kOhm ... 1000 kOhm
Resistance	0-1 kOhm, 0-10 kOhm, 0-100 kOhm, 0-1000 kOhm	0-1 kOhm, 0-10 kOhm, 0-100 kOhm	0-1 kOhm, 0-10 kOhm, 0-100 kOhm
Pt100 2-/3-wire	-200°C...850°C / -328°F...1562°F	-200°C...850°C / -328°F...1562°F	-200°C...850°C / -328°F...1562°F
Pt100 2-/3-/4-wire	-	-200°C...850°C / -328°F...1562°F	-200°C...850°C / -328°F...1562°F
Pt1000 2-wire	-200°C...850°C / -328°F...1562°F	-	-200°C...850°C / -328°F...1562°F
Thermocouple	Type L, J, K, B, S, N, E, T, R	Type L, J, K, B, S, N, E, T, R	Type L, J, K, B, S, N, E, T, R
AC true RMS	-	10 VAC; 50 VAC, 1 AAC, 5 AAC	10 VAC; 50 VAC, 1 AAC, 5 AAC
H-type (H = high voltage)	-	600 VAC, 300 VAC, 1AAC, 5 AAC	600 VAC, 300 VAC, 1AAC, 5 AAC
Frequency	-	0,01 Hz to 999,99 kHz	0,01 Hz to 999,99 kHz
Strain gauges measurement	-	1 mV/V; 2 mV/V; 3.3 mV/V free up to 4.4 mV/V 10 V / 20-40 mA bridge voltage; 250-500 Ohm	1 mV/V; 2 mV/V; 3.3 mV/V free up to 4.4 mV/V 10 V / 20-40 mA bridge voltage; 250-500 Ohm
Supply			
230 VAC	96x48 / 96x24 / 72x36 mm	96x48 mm	-
24 VDC galv. not isolated	48x24mm - Multi-function meas. input	-	-
24 VDC galv. isolated	96x48 / 96x24 / 72x36 / 48x24 mm	-	48x24 mm
10-30 VDC galv. isolated	-	96x48 mm	-
100-240 VAC 50/60 Hz; DC ± 10%	-	-	96x48 / 96x24 / 48x24 mm
10-40 VDC; 18-30 VAC50/60 Hz	-	-	96x48 / 92x24 mm
Outputs			
Analog output	-	0/4...20 mA, 0-10 V, 16 Bit	0/4...20 mA, 0-10 V, 16 Bit
Sensor supply	-	24 VDC, 50 mA, 10 VDC, 50 mA	24 VDC, 50 mA, 10 VDC, 50 mA
Switching outputs	2 relay outputs (M1 tricolour) 2 PhotoMos outputs (M1 current loop) 2 relay outputs (M1 in 72x36 mm) 2 solid state output circuits (M1 with multi-function measur. input)	2 relay outputs	4 relay outputs or 8 PhotoMos outputs in 96x48 mm 2 relay outputs in 96x24mm, 96x48 mm 2 PhotoMos outputs in 48x24 mm
Interface	-	Profibus DP	RS232 or RS485, Modbus protocol
Brightness control	-	Dimming and keypad	Dimming and keypad

Product overview – TFT, MH-1U and MG

Product line	TFT1-13	TFT1-11	MH-1U	MG
Dimensions	B96xH48xD25 mm (with transformer 42 mm, with plug-in terminal 47 mm)	B96xH48xD25 mm (with transformer 42 mm, with plug-in terminal 47 mm)	B22,5 x H117,2 x T107 mm	B284xH110xT52 mm, B470xH155xT58 mm
Display colour	Red, green, white, black or orange (selectable)	Red, green, white, black or orange (selectable)	Red	Red (green, blue, orange on request)
Display	3x -1999...9999, full-graphic TFT-display	-1999...9999, full-graphic TFT-display	3-digit -199...999 (internal -1999...9999)	4-digit -1999...9999 (6/8)
Digit height	9 mm	15 mm	7 mm	57 mm, 100 mm (200 mm on request)
Protection class	Front side IP65 standard, rear side IP00	Front side IP65 standard, rear side IP00	-	IP65
Resolution	14 bit at 1 second measuring time	14 bit at 1 second measuring time	14 bit at 1 second measuring time	14 bit at 1 second measuring time
Measuring input selectable via terminal				
Voltage/Current	0...10 V Ri > 100 kOhm / 0/4...20 mA Ri = ~125 Ohm	0...10 V Ri > 100 kOhm, 0...2 V Ri ≥ 10 kOhm, 0...1 V Ri ≥ 10 kOhm, 0...50 mV Ri ≥ 10 kOhm / 0/4...20 mA Ri = ~125 Ohm	0...10 V Ri > 100 kOhm, 0...2 V Ri ≥ 10 kOhm, 0...1 V Ri ≥ 10 kOhm, 0...50 mV Ri ≥ 10 kOhm / 0/4...20 mA Ri = ~125 Ohm	0...10 V Ri > 100 kOhm, 0...2 V Ri ≥ 10 kOhm, 0...1 V Ri ≥ 10 kOhm, 0...50 mV Ri ≥ 10 kOhm / 0/4...20 mA Ri = ~125 Ohm
Pt100 3-wire	no	-50...200°C / -58...392°F -250...850°C / -328...1562°F	-50...200°C / -58...392°F -250...850°C / -328...1562°F	-50...200°C / -58...392°F -250...850°C / -328...1562°F
Pt1000 2-wire	no	-250...850°C / -328...1562°F	-250...850°C / -328...1562°F	-250...850°C / -328...1562°F
Thermocouple	no	Type L, J, K, B, S, N, E, T, R	Type L, J, K, B, S, N, E, T, R	Type L, J, K, B, S, N, E, T, R
Frequency	no	0-10 kHz, NPN 0-3 kHz, PNP 0-1 kHz	0-10 kHz, NPN 0-3 kHz, PNP 0-1 kHz	0-10 kHz, NPN 0-3 kHz, PNP 0-1 kHz
Rotational speed	no	0...9999 1/min, 0...9999 1/min, 0,001 1/min	0...9999 1/min, 0...9999 1/min, 0,001 1/min	0...9999 1/min, 0...9999 1/min, 0,001 1/min
Counter	no	0...9999 (prescaler up to 1000)	0...9999 (prescaler up to 1000)	0...9999 (prescaler up to 1000)
Supply				
230 VAC	yes	yes	no	no
15-40 VDC galv. isolated / 20-30 VAC 50/60 Hz, ≤ 10 VA	no	no	yes	no
24 VDC galv. isolated	yes	yes	yes	no
100-240 VAC/DC	no	no	yes	yes
18-36 VDC galv. isolated	no	no	no	yes
Output				
Analog output	no	no	0/4-20 mA, 0-10 VDC optional	0/4-20 mA, 0-10 VDC optional
Sensor supply	no	no	24 VDC/50 mA optional	24 VDC / 50 mA / 10 VDC / 20 mA optional
Switching output	2 relay (changer) optional	2 relay (changer)	2 Relay output /PhotoMos outputs optional	2 relay outputs (normally open contact) optional
Interface	RS485 optional (relay not applicable)	RS485 optional (relay not applicable)	RS232/RS485, Bluetooth, data logger optional	RS232/RS485 optional
Digital input	no	no	only with sensor supply optional	only with sensor supply optional