Nokeval

User's manual

Timer 2066

Contents

Digital Timer model 2066

Start/Stop

Reset

General Description

Digital panel meter 2066 is designed for time counter, timer. Unit counts seconds into display after start input is activated. Counting starts with closing Start contact and ends with opening Stop contact. Counting can be continued by closing Start button again. Display can be resetted with closing Reset contact. Maximum counted time is 99 hours 59 minutes and 59 seconds. Hours, minutes and seconds are separated with commas.
Supply voltage is 90..240 VAC or 12...32 VDC (24 VAC).

Indicator family 2000

Digital Timer 2066 is a part of a larger product family. This series 2000 indicators are easy to modificate for different type of inputs e.g. 2066 can be changed for BCD-/ Grey-code input input simply by changeing the input card to type 2081. This kind of modification doesn't require any kind of calibration, user only configures the unit with front panel keys.
When input card is changed it changes also the model type. e.g. if this timer, model 2066 is modified for serial data indicator with 2071-RS485 input card, the model will change to 2071.

Technical specifications:

Timer display
99.59.59 (h/min/s):
Start/Stop contact starts or stops timer function
Reset contact resets the display 00.00.00

General:
Display	6 Digits
Resolution	1 second
Digit height	14.5 mm
Display color	Bright red LED
Powers supply	90...240 VAC or
	12...32 VDC or 24 VAC
Protection	Front panel P65 with gasket

Optional:
Field housing	Model 2000IP65-1 for 1 unit
	Model 2000IP65-2 for 2 unit
	Model 2000IP65-3 for 3 unit

Model Types:

2066-24VDC	Power 24 V (12-32 VDC)
2066-230VAC	Power 85...240VDAC
	No Polarity

2066 connections

Contacts

6
5 — Reset, closing contact
4

3
2 — Start /Stop terminals 2-3
1 — Close contact =Start
Open contact =Stop

Slot A

7 8 9

Terminal colour codes:
Grey 230 VAC
Green 24 VDC

Slot A is for input card, slots B
and C for optional cards.

Power 90...230 VAC

or 12.....32 VDC, 24 VAC
No Polarity

Dimensions

Install guides on the
corners helps centralizing
the case.

ø2,0

96

48

Cutoff
43.5 (H) x 90.5 (W) mm
± 0,5 mm

105

6

Gasket (IP65)

10
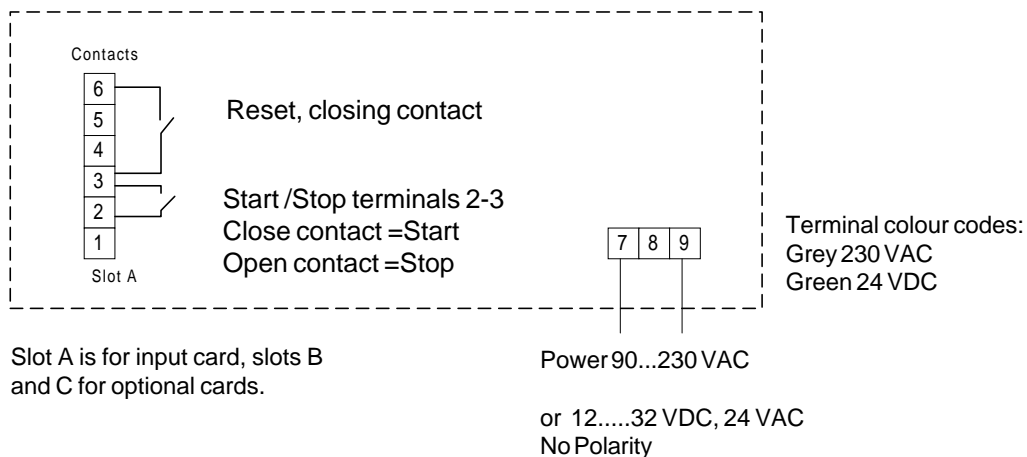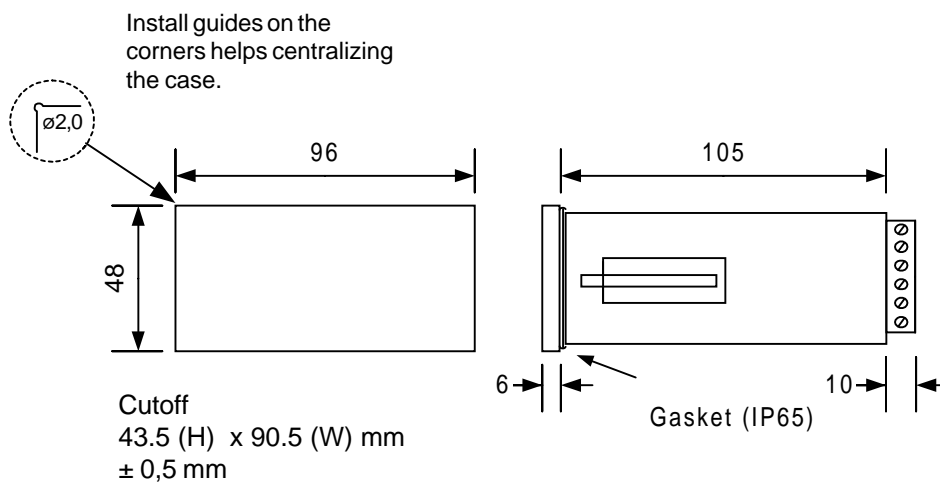
Removing unit from its case

Paina ja vedä

Detachable
connectors
2,5 mm²

A   B   C

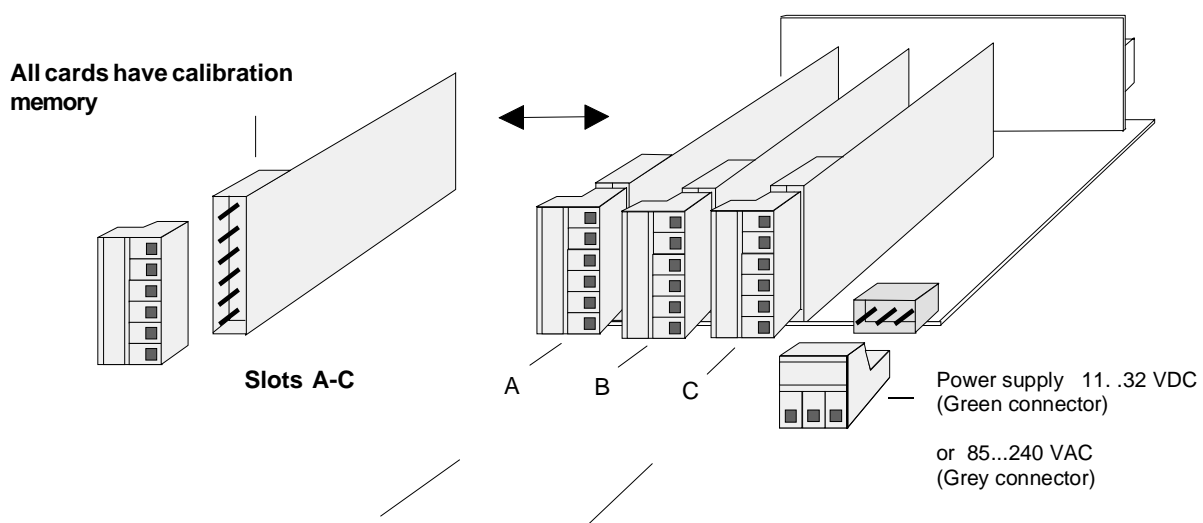Model 2066 accepts
only Slot A usage
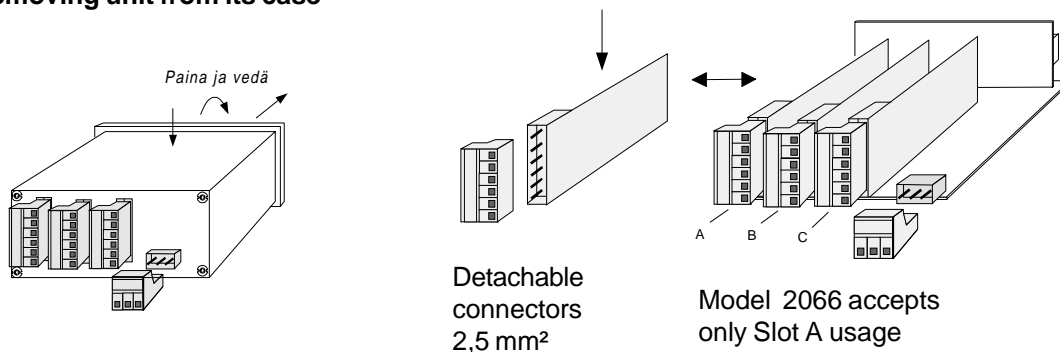
Series 2000 Panelmeter construction

The 2000 series panelmeters are modular and easy to assemble. According to customers wishes. The basic construction consists of mother board with tree slots, A, B and C. Slot A determines meter type and provides always input signal. Slot B and C are interchangeable. As factory delivery input signal is always installed into slot A , mA output into slot B and alarms into slot C. In case of f.ex 4 alarms and relay card with 2 change-over contact (2 + 2 relays) are used, you must place second relay card into slot B. If you accept only closing or opening relay contacts, you need only one relay card with 4 relays placed into slot C. The slot B is now usable for other optional outputs.

You can have different types of meters by only changing the input card in slot A. Data sheet of each type of meter dictates the possible combinations. Recalibration of card is not needed; only scaling and other settings must be set by front panel keys.

All cards have calibration memory

Slots A-C

A   B   C

Power supply 11. .32 VDC
(Green connector)

or 85...240 VAC
(Grey connector)

Change of meter type:
Input card is placed always to slot A. By changing input card you can get an other type of meter. You can change meter with pulse input to meter with current input, thermocouple, strain gage etc.

Additional slots:
Additional cards provide output 4..20 mA, alarms, serial interface, BCD output etc. Meter data sheet dictates possible combinations. grey connectors allow line voltage 110...230 VAC (relay contacts).

Power supply:
There are two different mother boards power supply 85..230VAC and 12...32 VDC. VDC-mother board accepts also 24 VAC. Connectors are colour coded.
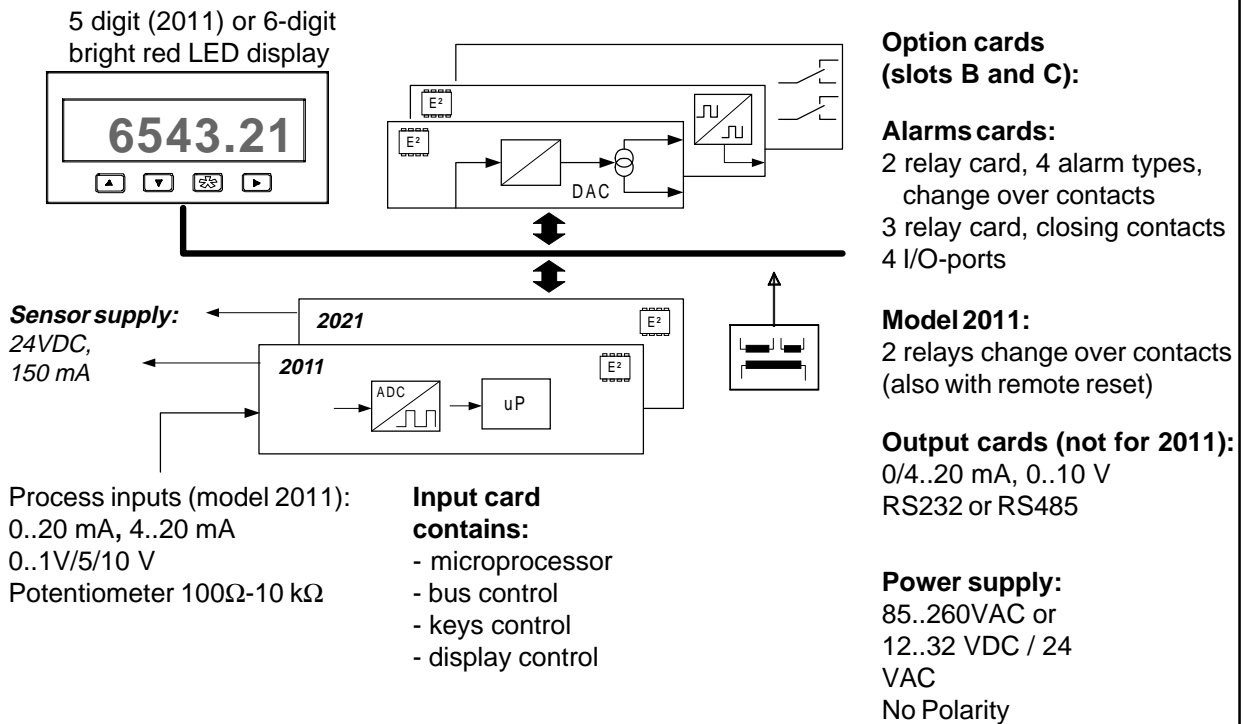
Removing meter from case:

Loose connectors and fastening screw beside power connector. Loose front panel and draw meter out from front. You may remove mother board from rear by opening four screws in corners of case
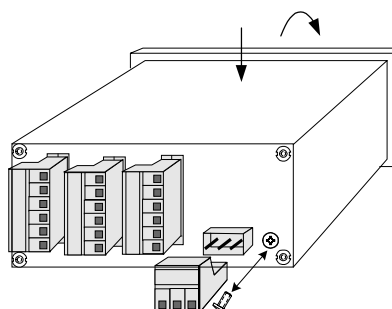
Press gently case behind front panel and draw frame outwards gripping upper part of frame.

Modular indicator serie 2000

5 digit (2011) or 6-digit
bright red LED display

6543.21

**Option cards
(slots B and C):**

Alarms cards:
2 relay card, 4 alarm types,
  change over contacts
3 relay card, closing contacts
4 I/O-ports

Model 2011:
2 relays change over contacts
(also with remote reset)

Sensor supply:
24VDC,
150 mA

2021

2011

ADC → uP

DAC

Output cards (not for 2011):
0/4..20 mA, 0..10 V
RS232 or RS485

Power supply:
85..260VAC or
12..32 VDC / 24
VAC
No Polarity

Process inputs (model 2011):
0..20 mA, 4..20 mA
0..1V/5/10 V
Potentiometer 100Ω-10 kΩ

**Input card
contains:**
- microprocessor
- bus control
- keys control
- display control

Indicator 2011 can have limited part of 2000 series functions. Model 2021 contains also
process inputs but it can also measure RTD-sensors and thermocouples. 2021 has more
accurate and faster A/D-converter (16 bit 1/64 000).

2000 series input and option cards:

2011-IN	Process input	**2000-BASE**	Base card with power supply
2021-MU	Multi input	**2000-REL2**	Alarm card, NO/NC
2031-IR	Infrared sensor input	**2000-REL3**	Alarm card, Closing contacts
2041-STG	Strain gage measurement	**2000-OUT**	Output card, U and I
2051-Hz	Scaleable frequency indicator	**2000-RS**	Serial output RS232 or RS485
2061-CNT	Counter input (max 5 kHz)	**2000-I/O**	4 pcs input /output ports
2071-RS	Serial input RS232 / RS485		(60 V / 100 mA)
2081-BCD	BCD-input (1-5 digits)		