

Programmable transmitter 6740

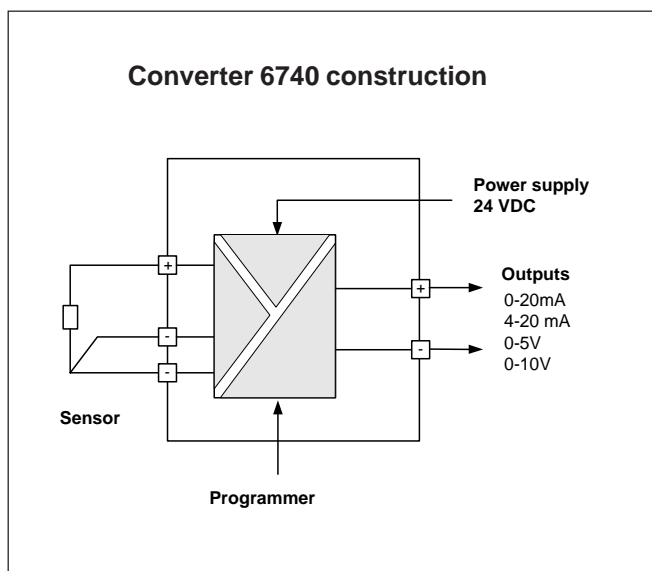
- Thermocouples B,C,D,E,G,J,K,L,N,R,S,T
- RTD's Pt100, Pt500, Pt1000 ja Ni100, Ni1000
- Process inputs: 0..20mA, 4..20 mA, -20 .. +20 mA
0..5 V, 0..10 V, -10 .. +10 V
- IR-thermocouples
- mV-inputs -100 .. +100 mV
- Outputs: 0..20, 4..20 mA, 0..5, 0..10 V
- Programming by PC or hand held programmer 6790
- Galvanic isolation, input/output/power supply
- Power supply 24VDC



Signal converter 6740 is exceptionally versatile and accepts almost all common sensor inputs. You can configure it by PC. Transmitter front has configuration connector which connects adapter cable POL-RS232 to serial port of the PC. Menu based configuration program is easy to use. By hand held programmer 6790 you can easily control or configurate the transmitter in field conditions.

The 16 bit A/D converter enables high accuracy. Linearity of A/D converter is 0.005 % and conversion accuracy of output signal is 0.05 %, without sensor linearization error. Galvanic isolation is specially important with thermocouples but potential differencies with other measuring circuits can be avoided also in case of process input signals.

Small size converter is provided with detachable connectors which speed up installation and programming. Large sensor selection and other inputs as well as versatility reduce stocking costs significantly because the 6740 suits for most measuring applications.



Technical specification:

Thermocouples:

Sensor	Range	Linearity
E	-100.... 900°C	< 0.3°C -50.... 900°C
J	-150.... 900°C	< 0.3°C -50... 900°C
K	-150.... 1350°C	< 0.4°C -40... 1300°C
L	-100.... 900°C	< 0.4°C -50... 900°C
T	-150... 400°C	< 0.3°C -150... 400°C
N	0....1300°C	< 0.4°C 0.... 1300°C
R	0....1700°C	< 0.4°C 400.... 1700°C (<1°C < 300 °C)
S	0....1700°C	< 0.4°C 300.... 1700°C (<1°C < 300 °C)
C (W5)	0....2200°C	< 0.4°C 400.... 2200°C (<0.4°C < 400 °C)
D (W3)	0....2200°C	< 0.4°C 500.... 2200°C (<1°C < 500 °C)
B	400... 1700°C	< 0.5°C 400.... 1700°C
G (W)	1000.. 2200°C	< 0.5°C 1000...1700°C (<3 °C >1700 °C)
Range selection	freely selectable	
Calibration accuracy	< 0.1 % of max. span	
Cold junction compensation	< 0.05 °C / °C	
Sensor wire influence	< 10 kohm, negligible	

RTD's:

Range	Pt100, Pt500, Pt1000, Ni100 -200..+700 °C (Pt100, Pt500) -200...+300 °C (Pt1000) -60....+175 °C (Ni100)
Sensor connections	3-, 4-wire connection
Max. sensor wire resistance	<30 ohm /wire
Sensor current	0.3 mA typical
Accuracy	0.1 % of reading (°C) +0.1 °C
Calibration accuracy	±0.1 °C (0 °C)
Linearity	< 0.1 °C (-200..+700 °C)
Sensor error correction	freely offset and span corrections
Other resistance inputs	0-1000 ohm, potentiometer 50-500 ohm

mV-inputs:

Accuracy	-100..+100 mV 0.02 % of span
Linearity	0.01 % of span
input impedance	>10 Mohm

Process inputs:

Input impedance	0..20 mA, 4..20 mA, -20..+20 mA, 0..5, 0..10 V, -10..+10V Current: 5 ohm and voltage: 1 Mohm
Accuracy	0.02 % of span
Linearity	0.01% of span

IR-anturit:

Range	Exergen 140F-K and 440F-K -40...+350°C (linearized range)
Range	-30...+600°C (linearized range)
Emissivity correction	selectable by PC

Output:

Output	0..20, 4..20 mA, 0..5 V, 0..10V
Output scaling	scaling on whole range, straight and reversed
Resolution	< 0.03 % of span (DAC)
Calibration accuracy	<0.05% of span
Sensor break monitoring	3.5 or 24 mA or >10V
Output limiter	24 mA
Output load	<600 Ω for current and >10 kΩ for voltage

Configuration:

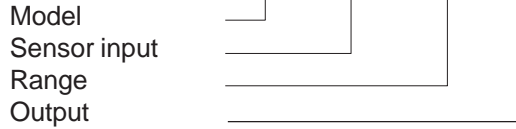
Connection	2-pole Nokeval POL-connection (transmitter)
Serial data	RS232, 9600bps, 9-pole D-connector by PC's serial port
Serial protocol	Meku / Nokeval
Hand held programmer	6790, red LED-display

General:

Power supply	24 VDC, ±15 %
Power consumption	max. 40 mA
Temperature effects	<0.005 %/°C of input range
Galvanic isolation	input/output 1000 VDC/ 1 min.
Measuring rate	4 samples/s.
AD-converter	16 bit
Output DAC	12 bit
Operating temperature	0..60 °C
Ambient storage	-20...+70 °C
Humidity (non-condensing)	0..95 %RH
Weight	80 g
Connection	1.5 mm ² , AWG 16
Protection	IP20

How to order:

Type: 6740 - Pt100 - 0/600 - 0/10



Example. 6740-Pt100-600-0/10, sensor: Pt100, range: 0..600 °C, output: 0..10V

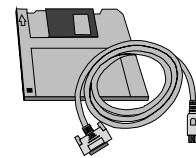
Transmitter is freely programmable but if you like it factory configured use above mentioned marking procedure.

Optional:

Cable for transmitter/PC	POL-RS232
Configuration software	MekuWin
Hand held programmer	6790



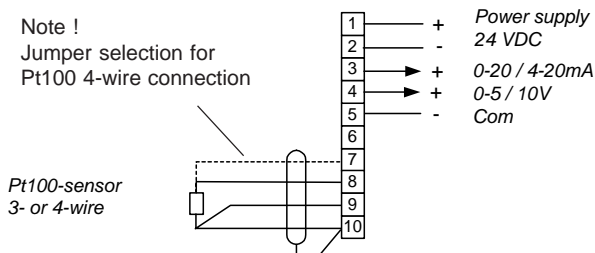
Hand held programmer 6790



Configuration software MekuWin

Connection and dimensions:

Note !
Jumper selection for Pt100 4-wire connection

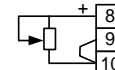


Pt100-sensor 3- or 4-wire

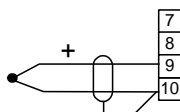
Potentiometer 3-wire connection 50-500 ohm



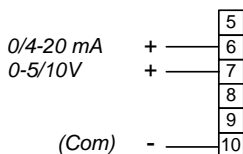
Potentiometer 2-wire connection 0-1000 ohm



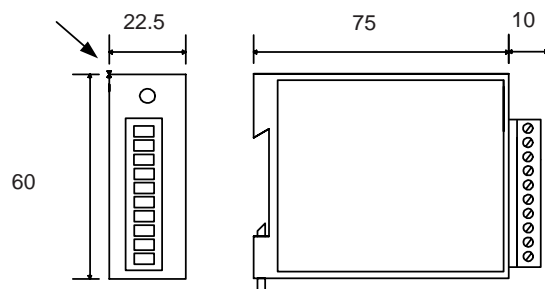
Thermocouple, mV-inputs and IR-sensors



mA- and voltage inputs



Socket for POL-RS232 cable



Removable terminals <1.5 mm²
Rail acc. to DIN 5002 (35mm)