Mitec Smart Cable

Specifications for Mitec RMS31/40 measuring station

Most types of sensor available on the market can be used with a Mitec RMS31 or 40 measuring station using the appropriate Mitec SmartCables. The measuring station will recognize the various signal types connected to its measuring channels and adapt automatically.

Input types include analog signals from sensors and instruments, pulses, status signals for ON/OFF registrations and time measurements. For more detailed specifications and a full listing of sensor types refer to Mitec's Smart Cable catalog.

DC-voltage

Type…………………………………	Single-ended or differential depending on signal cable.
Measuring range…………………...	Selectable, 50mV to 50V.
Resolution…………………………...	Better than ±0.1% of selected range.
Accuracy……………………………	Max. deviation ±0.2% of selected range.
Input impedance…………………...	Max. 50 Mohm, depending on signal cable type.
Polarity……………………………...	Unipolar or bipolar.

AC-voltage

Type…………………………………	Showing RMS.
Frequency…………………………...	25 to 150 Hz.
Measuring range……………………	Selectable, 100mV to 50V.
Resolution…………………………...	Better than ±0.1% of selected range.
Accuracy……………………………..	Max. deviation ±0.2% ±2 mV of selected range.
Input impedance……………………	> 0.2 Mohm

DC-current

Measuring range……………………	Selectable, 50μ to 100mA. Higher is available with external shunt resistor.
Resolution…………………………...	Better than ±0.1% of selected range.
Accuracy……………………………..	Max. deviation ±0.2% of selected range.
Input impedance……………………	10 ohm to 2kohm depending on selected range. 50 ohm at 0-20/4-20mA.
Polarity……………………………	Unipolar or bipolar.

AC-current

Type…………………………………	Showing RMS.
Frequency…………………………...	25 to 150Hz.
Measuring range……………………	Selectable, 50μ to 100mA. Higher is available with external shunt resistor
Resolution…………………………...	Better than ±0.1% of selected range.
Accuracy……………………………..	Max. deviation ±0.3% of selected range.
Input impedance……………………	10 ohm to 2kohm depending on selected range.

Temperature Pt-100

Type…………………………………	Resistive sensor, platinum 100 4-wire connection.
Designation…………………………	MU-TPxxx (Different ranges available on request).
Measuring range……………………	Selectable, standard is -50 to 250°C.
Resolution…………………………...	Better than ±0.1C.
Accuracy, excluding sensor………...	Max. deviation ±0.3%

Temperature thermocouples

Types……………………………...	All
Measuring range……………………..	Selectable. Max. type K, -100°C to 1200°C
	Min type J, -50°C to 250°C; Max. type T, -100°C to +300°C
Resolution…………………………..	Better than ±0.1% of selected range.
Accuracy, excluding sensor…………..	Max. deviation ±0.1% depending on selected range and type.
Cold junction compensation………..	Automatic, individual for each sensor, built into the connector.
	Range -30°C to 50°C, max. deviation ±0.4°C.
Connector…………………………...	Type "mini". (Other types on request).
Cables……………………………..	4m LIYY 4 x 0.14 (Other types on request).

Temperature thermistor 10k (sensor included)

Type designation……………………	MU-TE100 (Other types on request).
Measuring range……………………..	-40°C to +120°C
Resolution…………………………..	0.1C
Accuracy, including sensor…………	Max. deviation ±0.3C.
Time constant………………………	5 to 40 seconds depending on type.
Connector…………………………...	Mini-DIN
Cables……………………………..	10m LIYY 2 x 0.14

Pulse

Type………………………………….	Potential free contact, input not galvanically isolated, or
	Voltage pulse 4-24 V DC, isolated input 0.2 kV.
Max. frequency……………………...	16 Hz @ 50% duty cycle.
Min. pulse length……………………	30 ms.
Engineering unit……………………	Automatic division of sensor defined unit with time-unit. Time-unit is selectable in seconds, minute, hour, day, week. Sensor unit is defined when sensor is connected.

Frequency

Type………………………………….	AC, not galvanically isolated.
Input level…………………………..	Min 5V, max 8V RMS.
Input impedance……………………	5 kohm.
Max frequency………………………	100 Hz
Accuracy……………………………..	Typ 0.5%

Time measurement

Type………………………………….	Potential free contact, input not galvanically isolated.
	Voltage 4-24 V DC, isolated input 0.2kV.
Measurement resolution……………	1 second.
Engineering unit……………………	Selectable presentation as hr/day, hr/wk, sec/min, min/hr or %.
Presentation resolution……………..	Given by selected registration interval.

Status ON/OFF

Type………………………………….	Potential free contact, input not galvanically isolated.
	Voltage 4-24 V DC, isolated input 0.2kV.
Minimum detection time…………...	30ms.
Resolution…………………………..	Given by selected registration interval (automatic glitch-detection, resolution 1 sec.)