

MERILNIKI Z OMEJILNIMI KONTAKTI

Tip MI7350 ima možnost signalizacije spodnje in zgornje meje nastavitve (MIN in MAX). Merilnik ima vgrajena dva izhodna releja preklopne moci 600VA. Prikaz prekoracenja ali podkoracenja nastavitve je z LED na skali merilnika. Signalizira lahko enosmerne ali izmenicne tokove ali napetosti, frekvenco in temperaturo.

Bimetalni merilniki MQ0227 in kombinirani bimetalni merilniki maksimuma toka MQ0237 signalizirajo zgornjo mejo povprecnega toka s preklopnim relejskim izhodom.

Po dogovoru izdelamo bimetalne merilnike tudi z zašcitnim transformatorjem.

METERS WITH LIMIT CONTACTS

MI7350 can signal minimal and maximal setting limits (MIN and MAX). The meter is provided with two output relays of 600 VA switching power. Setting over or under the limits is displayed with a LED on the meter scale. DC or AC currents or voltages, frequency and temperature can be signalised.

MQ0227 bimetal meters and MQ0237 combined bimetal maximum current meters signalise maximal limit of average current with one relay output.

Bimetal meters with a saturated transformer are available on request.



MI7350



MQ0227



MQ0237

TIP/TYPE		MI7350	MQ0227	MQ0237
Celni okvir (mm) / Front frame (mm)		96 x 96	96 x 96	96 x 96
Izrez za vgradnjo (mm) / Cutting for mounting (mm)		92 x 92	92 x 92	92 x 92
Dolžina skale (mm) / Scale length (mm)		95	95	95/72
MERJENA VELICINA/ MEASURED QUANTITY				
DC U	40...800 mV	??	??	??
	1...60 V	??	??	??
	100...600 V	??	??	??
AC U	100...800 mV	??	??	??
	1...60 V	??	??	??
	100...600 V	??	??	??
AC Uef	6...60 V	??	??	??
	100...600V	??	??	??
DC I	25...600 ?A	??	??	??
	1...60 mA	??	??	??
	100...600 mA	??	??	??
AC I	1...5 A	??	??	??
	1...6 mA	??	??	??
	10...600 mA	??	??	??
	8 min. 1, 2 A	??	??	??
	8 min. 6 A	??	??	??
AC Ief	100...600 mA	??	??	??
	1...5 A	??	??	??
	1/2A, 1.5/3A, 2.5/5	??	??	??
	4/8A, 5/10A	??	??	??
FREKVENCA FREQUENCY f	45...55 Hz	??	??	??
	48...52 Hz	??	??	??
	45..65 Hz	??	??	??
	55..65 Hz	??	??	??
TERMOCLENI THERMOCOUPLE (J,K,S)	0...250°C	??	??	??
	0...600°C	??	??	??
	0...1200°C	??	??	??
	0...1600°C	??	??	??

TEMPER. ODVISNI UPORI <i>TEMP. DEPENDENT</i> <i>RESISTOR</i> PT100 (?)	-200...+800°C ? T...50°C min	??	??	??
		??	??	??
		??	??	??
		??	??	??

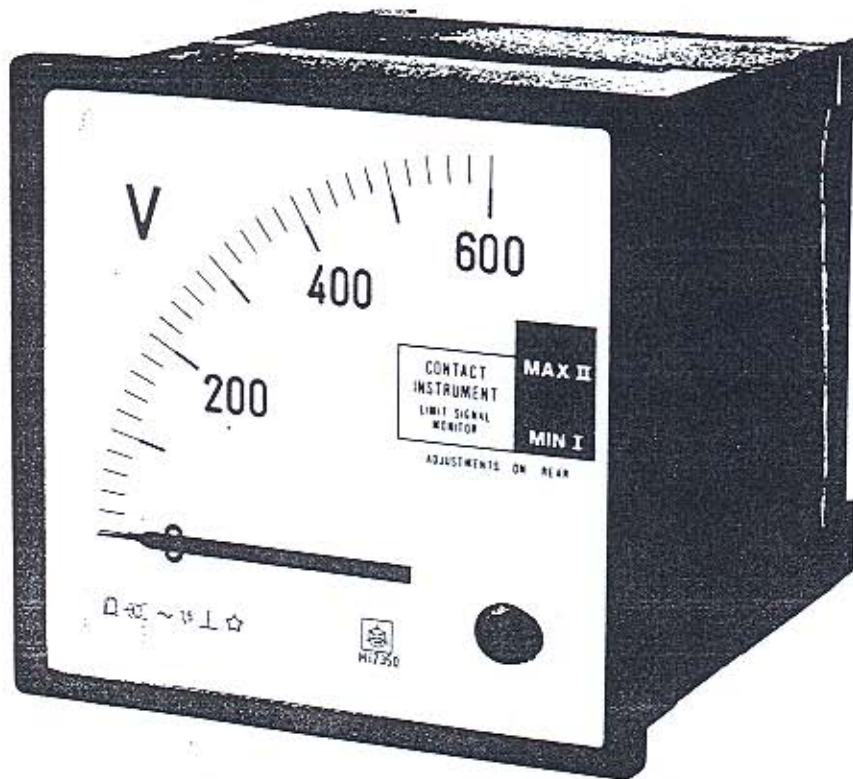
Standardno napajanje 230V AC; Enosmerno napajanje: 24V, 48V,
 on request
 60V, 110V po dogovoru.
 Dimenzijske skice na strani 47 - 48.

Standard supply 230V AC; 24 V, 48 V, 60 V, 110 V DC

Dimensional drawings on page 47 - 48.



MI7350 ELECTRONIC SIGNALER



- * Analog measuring instrument with signalization of minimum and maximum limit value.
- * Two relay output contacts : Channel I , Channel II
- * Delay of relay activating: 0.5 ... 30 sek
- * Indication with LED-s MAX II and MIN I when measuring value is greater or lower then limit value
- * DIN 43700 plastic housing for mounting in panels, mechanically resistant and unblamable UL94V - 0. Dimensions 96 x 96 mm.
- * Scale can be replaced without opening of instrument.
- * Protection cover for protection of contacts and adjusting potentiometers with possibility to plumb the cover.

DC voltage and DC current inputs

Measuring system:

Instrument with moving coil for measuring DC current.

DC V - meter ranges: 40 mV ... 600 V

Accuracy: 1.5 %

Input resistance: > 10 MΩ for ranges 40 mV ... 4 V

> 1 MΩ for ranges 5V ... 600 V

DC A - meter ranges: 25 μA ... 5 A

Accuracy: 1.5 %

Input resistance is range dependent on ranges.

Shunt voltage is 100 mV

AC voltage and AC current inputs

Measuring system: Instrument with moving coil and

rectifier for measuring AC current and voltages.

AC V - meter ranges: 100 mV ... 600 V

AC A - meter ranges: 1 mA ... 5 A

Accuracy: 1.5 %

Frequency range: 40 ... 400 Hz

Input resistance: > 1MΩ < 50 pF

Measuring of AC effective values

Measuring system: Instrument with moving iron for effective values measuring.

AC Vef - meter ranges: 6 V ... 600 V

AC Aef - meter ranges: 100 mA ... 5 A (5/10A)

Accuracy: 1.5 %

Frequency range: 30 ... 100 Hz

Frequency meter

Measuring ranges: 45 ... 55 Hz Accuracy: 0.5 %

48 ... 52 Hz Accuracy: 0.5 %

45 ... 65 Hz Accuracy: 1 %

55 ... 65 Hz Accuracy: 0.5 %

58 ... 62 Hz Accuracy: 0.5 %

Input voltage: 60 ... 500 V AC

Thermometer for temperature measuring with thermocouples

Temperature sensors:

thermocoupler - IEC 584 - 1

Measuring ranges: 0 ... 250 °C (Fe - const) J

0 ... 600 °C (Fe - const) J

0 ... 1200 °C (NiCr - Ni) K

0 ... 1600 °C (PtRh - Pt) S

Accuracy: 1.5 %

Thermometer; temperature measuring input Pt100

Temperature sensor: Pt100 - IEC 751

Measuring ranges: -200 ... 0 ... + 50 °C

0 ... 250 °C

200 ... 450 °C

400 ... 650 °C

Connecting: Two wires

Accuracy: 1.5 %

OUTPUTS

Signaler has two output relay contacts

Switching element:

potential free alternating relay contact

Maximal switching power at resistive load

≤ 600 VA (≤3A, ≤250V)

- Output CHANNEL I: adjustable by MIN limit value

- Output CHANNEL II: adjustable by MAX limit value

CHARACTERISTIC DATA OF SIGNALING APPARATUS

Limit value and Delay time adjusting

Adjusting elements are on rear side of housing:

Range of limit value

adjusting (MIN, MAX) 0...100% F.S.D.

Setting accuracy: ± 5% (25...75%),

±15% (0...25%, 75...100%)

Hysteresis: < 1% F.S.D.

Delay time adjusting range: 0.5...30 s,

setting accuracy ±20% ±2s

GENERAL DATA

SUPPLY

110/220 V ± 10% 45 ... 65 Hz

Power consumption 3 VA

TEMPERATURE LIMITS

Operating temperature range: 0 ... 55 °C

Storage temperature range: -20 ... 60 °C

relative humidity:

≤75% yearly average, no condensation

Supply voltage influence: < 0.2 % for ± 10 %Un

HOUSING

Material: plastics flame - retardant

(flammability class UL 94 V - 0)

Front dimensions: 96 mm x 96 mm (DIN 43700)

Panel cut-out dimensions: 92 mm x 92 mm

Installation depth: max. 120 mm

PROTECTION MODE

to DIN 40 050

Housing: IP 52

Connection: IP 00

Protection class II to VDE 0100

(protection isolation)

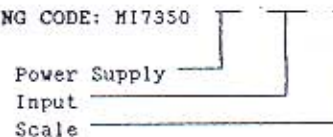
ELECTRICAL CONNECTIONS

Screw Connector for wires 2.5 mm²

ORDERING DATA

Selection of signalers for ordering can be made by ordering code.

ORDERING CODE: MI7350



Power supply: 1 220 V 45 ... 65 Hz

2 110 V 45 ... 65 Hz

3 Special request

INPUTS:

1xx DC V - meter

2xx AC V - meter measuring of AC mean voltage value

3xx AC Vef - meter measuring of AC effective volt. 1U

4xx DC A - meter measuring of direct current

5xx AC A - meter measuring of AC current mean value

6xx AC Aef - meter measuring of AC current effective value

7xx Hz - meter Frequency meter

8xx Thermometer Thermocouples input thermometer

9xx Thermometer Pt100 input thermometer

SCALE:

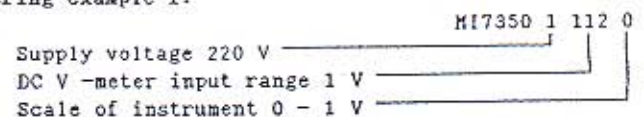
0 Scale corresponds to input value units and range

1 Scale 0 ... 100 %

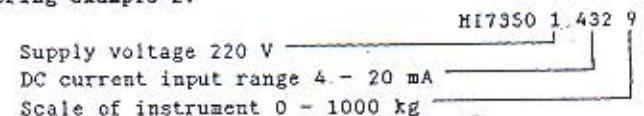
8 Without scale

9 Scale according to specification

Ordering example 1:



Ordering example 2:

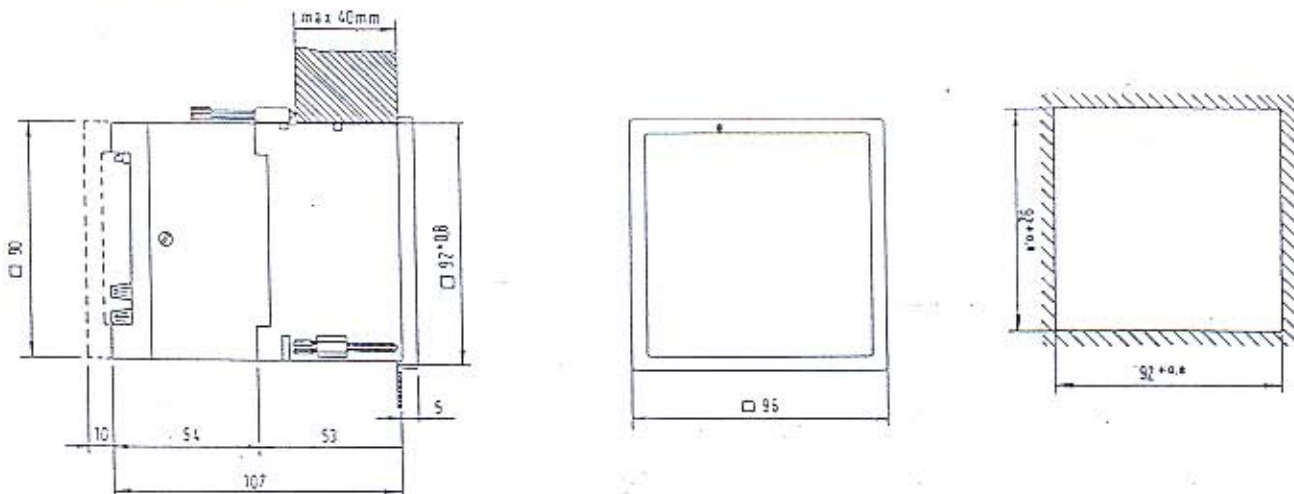


DC V			AC V			AC Vef			DC A			AC A			AC Aef		
101	40	mV	201	100	mV	301	6	V	401	25	μA	501	1	mA	601	100	mA
102	50	mV	202	150	mV	302	10	V	402	40	μA	502	1.5	mA	602	150	mA
103	60	mV	203	250	mV	303	15	V	403	50	μA	503	2.5	mA	603	200	mA
104	100	mV	204	300	mV	304	20	V	404	60	μA	504	4	mA	604	300	mA
105	150	mV	205	400	mV	305	25	V	405	100	μA	505	5	mA	605	400	mA
106	250	mV	206	500	mV	306	40	V	406	150	μA	506	6	mA	606	500	mA
107	300	mV	207	600	mV	307	50	V	407	250	μA	507	10	mA	607	600	mA
108	400	mV	208	800	mV	308	60	V	408	300	μA	508	15	mA	608	1	A
109	500	mV	209	1	V	309	100	V	409	400	μA	509	20	mA	609	1.5	A
110	600	mV	210	1.5	V	310	150	V	410	500	μA	510	25	mA	610	2.5	A
111	800	mV	211	2.5	V	311	250	V	411	600	μA	511	40	mA	611	4	A
112	1	V	212	4	V	312	300	V	412	1	mA	512	50	mA	612	5	A
113	1.5	V	213	5	V	313	400	V	413	1.5	mA	513	60	mA			
114	2.5	V	214	6	V	314	500	V	414	2.5	mA	514	100	mA			
115	4	V	215	10	V	315	600	V	415	4	mA	515	150	mA	650	1/2	A
116	5	V	216	15	V				416	5	mA	516	250	mA	651	1.5/3	A
117	6	V	217	20	V				417	6	mA	517	300	mA	652	2.5/5	A
118	10	V	218	25	V				418	10	mA	518	400	mA	653	4/8	A
119	15	V	219	40	V				419	15	mA	519	500	mA	654	5/10	A
120	20	V	220	50	V				420	20	mA	520	600	mA			
121	25	V	221	60	V				421	25	mA	521	1	A			
122	40	V	222	100	V				422	40	mA	522	1.5	A			
123	50	V	223	150	V				423	50	mA	523	2.5	A			
124	60	V	224	250	V				424	60	mA	524	4	A			
125	100	V	225	300	V				425	100	mA	525	5	A			
126	150	V	226	400	V				426	150	mA						
127	250	V	227	500	V				427	250	mA						
128	300	V	228	600	V				428	300	mA						
129	400	V							429	400	mA						
130	500	V							430	500	mA						
131	600	V							431	600	mA						
									432	4-20	mA						
									433	1	A						
									434	1.5	A						
									435	2.5	A						
									436	4	A						
									437	5	A						
199			299			399			499			599			699		

H z			Thermometer - thermocouple				Thermometer - Pt100		
701	45...55	Hz	801	0...250	°C	type J	901	-200...+50	°C
702	48...52	Hz	802	0...600	°C	type J	902	0...250	°C
703	45...65	Hz	803	0...1200	°C	type K	903	200...450	°C
704	55...65	Hz	804	0...1600	°C	type S	904	400...650	°C
705	58...62	Hz							
799			899				999		

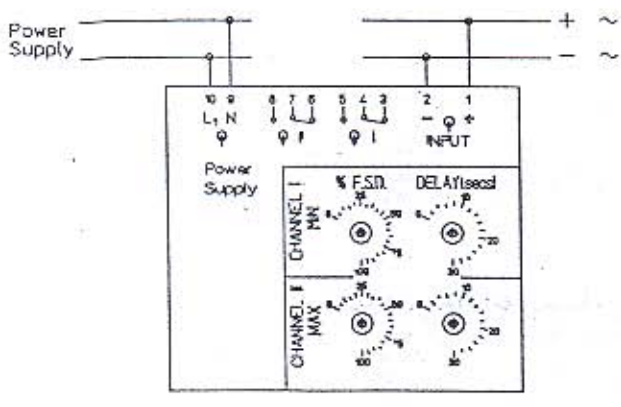
- * Thermometers are delivered without temperature probes
- * Temperature probes can be ordered separately.
- * Ranges x99 on special request

Housing dimensions

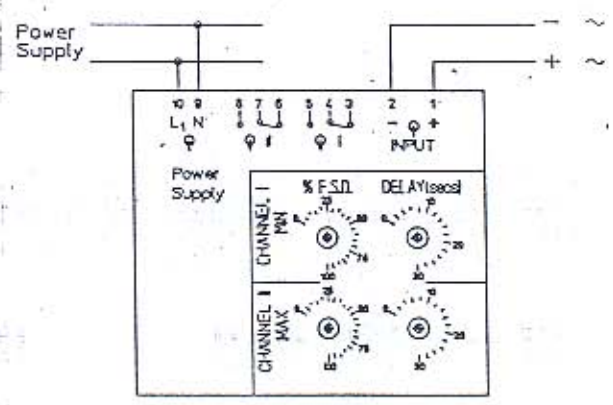


WIRING OF INSTRUMENT

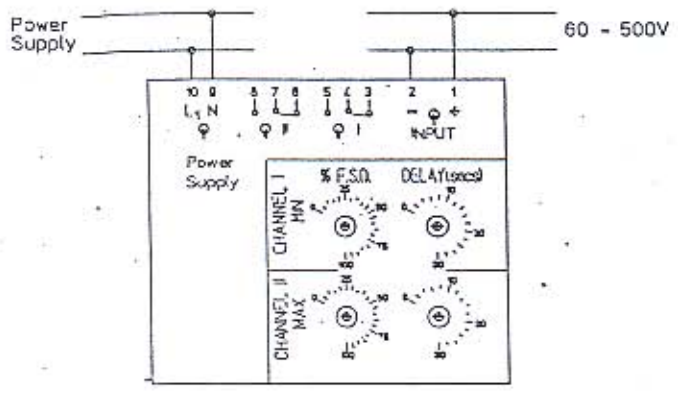
Connecting: DC V - meter
 AC V - meter
 AC Veff - meter



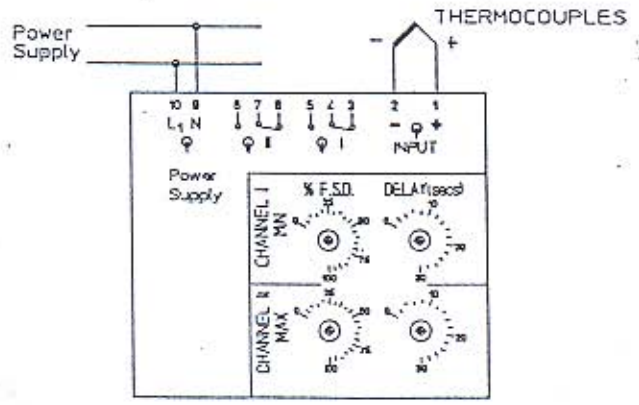
Connecting: DC A - meter
 AC A - meter
 AC Aeff - meter



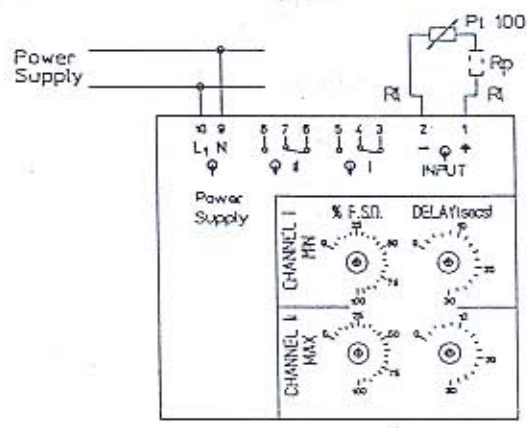
Connecting of frequency meter



Connecting of thermometer with thermocoupler input



Connecting of thermometer with Pt100 input



Pt 100 (RTD probe)
 Rp = wires resistivity compensation resistor of manganin or potentiometer
 R1 = wires resistivity
 Rp + R1 = 10Ω

ATTENTION: Wires resistivity plus compensation resistor = 10Ω
 Otherwise the instrument will display incorrect value.



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