



Indicatore digitale di tensione o corrente continua e pulsante 96x48 mm

- Misura e visualizzazione di tensione o corrente continua e pulsante unidirezionale
- Misura e visualizzazione di velocità, da dinamo tachimetrica
- Visualizzazione di qualsiasi grandezza direttamente proporzionale alla tensione o corrente di ingresso
- 5 portate d'ingresso 200mV / 20V / 200V / 20mA / 2mA
- Campo di misura programmabile 25...100% della portata
- Visualizzazione programmabile
- Memorizzazione valore massimo misurato (azzerabile)
- Uscita 24Vcc per alimentazione sensori (temperatura, pressione, livello, ecc.)

Direct and pulsating voltage or current digital meter 96x48 mm

- To measure and display unidirection and pulsating current or voltage
- To measure and display speed, from tachometer dynamo
- Display of any proportional quantity directly proportional to input current or voltage
- 5 input ranges 200mV / 20V / 200V / 20mA / 2mA
- Programmable measuring range 25...100% of the range
- Programmable display value
- Storage of highest measured value (resettable)
- External sensor supply output 24Vdc (temperature, pressure, level, etc.)

DG4Q0



Alimentazione sensori
Sensors supply
24Vcc/dc

Misura
Measure
50mV...200V
1...20mA



Programmazione
Programming
Portata Range
Campo di misura Measuring range
Visualizzazione Display

A	V	C	%	W	Hz
kW	MW	kg	bar	var	kvar
Mvar	R.P.M.	m/min	Giri/min	kg/cm ²	m ³ /h

CODICE DI ORDINAZIONE ORDERING CODE	AL. AUSILIARIA AUX. SUPPLY		USCITA OUTPUT
	ca / ac	cc / dc	
DG4Q01P2	24V	-	
DG4Q03P2	115V	-	
DG4Q06P2	230V	-	
DG4Q07P2	240V	-	
DG4Q0HP2	48V	20...150V	
DG4Q0LP2	-	150...250V	
DG4Q01P22	24V	-	24V cc/dc
DG4Q03P22	115V	-	
DG4Q06P22	230V	-	
DG4Q07P22	240V	-	

VISUALIZZAZIONE

Tipo display: LED rossi, 7 segmenti

Altezza cifre: 14mm

N° punti visualizzazione: 10.000 (4 cifre)

Indicazione massima: 9999

Unità ingegneristica: personalizzabile dall'utente (targa adesiva)

Indicazione fuorisca (visualizzazione > 9999): indicazione " _ _ _ "

Aggiornamento visualizzazione: 3 letture/s

Aggiornamento misura: 3 letture/s

Memorizzazione valore massimo misurato (azzerabile)

Precisione¹ (riferita al campo di misura): $\pm (0,25\% + K) + 1$ digit

$K = 0,2 \frac{\text{portata}}{\text{campo di misura}}$ dove:

Portata = 200mV opp. 20V opp. 200V opp. 20mA opp. 2mA

Campo misura = fondo scala - inizio scala (0-200V = 200, 4...20mA = 16)

Es.: portata 200mV

campo di misura 0...150mV

Precisione = $0,25\% + 0,2 \frac{200}{150} = 0,5\% + 1$ digit

¹ con ingresso corrente o tensione continua

PROGRAMMAZIONE

Programmazione parametri: tastiera frontale, 3 tasti

Conservazione parametri di configurazione: memoria permanente (EEPROM) senza batteria

Accesso alla programmazione: combinazione di tasti

PARAMETRI PROGRAMMABILI

Portata (Un / In): 200mV - 20V - 200V - 20mA - 2mA

Campo di misura: min. 0...0,25Un / In • max. 0...Un / In

VISUALIZZAZIONE

Inizio scala: 0...9999 digit

Fondo scala: 10...9999 digit

Punto decimale: 00.00 - 000.0 - 0000

Azzeramento valore massimo misurato

INGRESSO

Inserzione: diretta

Misura: tensione oppure corrente continua o pulsante, valor medio

Forma d'onda: continua o pulsante con frequenza ≥ 50 Hz

TENSIONE NOMINALE Un: 200mV - 20V - 200V

CORRENTE NOMINALE In: 20mA - 2mA

DISPLAY

Tipe of display: 7 segments, red LED's

Digit height: 14mm

N° of display points: 10.000 (4 digit)

Maximum display: 9999

Engineering unit: user-customizable (adhesive label)

Overrange indication (display > 9999): indication " _ _ _ "

Display update: 3 readings/s

Measure update: 3 readings/s

Storage of highest measured value (resettable)

Accuracy¹ (referred to the measuring range): $\pm (0,25\% + K) + 1$ digit

$K = 0,2 \frac{\text{range}}{\text{measuring range}}$ where:

Range = 200mV or. 20V or. 200V or. 20mA or. 2mA

Measuring range = full scale - offset (0-200V = 200, 4...20mA = 16)

Ex.: range 200mV

measuring range 0...150mV

Accuracy = $0,25\% + 0,2 \frac{200}{150} = 0,5\% + 1$ digit

¹ with direct voltage or current input

PROGRAMMING

Parameters programming: front keyboard, 3 keys

Hold of configuration parameters: EEPROM memory, non volatile, no battery

Programming access: keys combination

PROGRAMMABLE PARAMETERS

Range (Un / In): 200mV - 20V - 200V - 20mA - 2mA

Measuring range: min. 0...0,25Un / In • max. 0...Un / In

DISPLAY

Offset: 0...9999 digit

Full scale: 0...9999 digit

Decimal point: 00.00 - 000.0 - 0000

Reset of highest measured value

INPUT

Connection: direct

Measurement: direct or pulsating current or voltage, average value

Waveform: direct or pulsating with frequency ≥ 50 Hz

VOLTAGE RATING Un: 200mV - 20V - 200V

CURRENT RATING In: 20mA - 2mA

Campo di misura selezionabile

Campo di misura massimo: 0...Un opp. 0...In

Campo di misura minimo: 0...0,25Un opp. 0...0,25In

È possibile selezionare qualsiasi valore compreso tra quello minimo e massimo ottenendo il campo di misura desiderato.

Impedenza di ingresso / caduta di tensione: vedi tabella

Sovraccarico permanente: 1,2Un – 1,2In

Sovraccarico istantaneo: 2Un/5s – 2In/5s

Esempio di campi di misura selezionabili:

Portata Range	200mV	20V	200V	20mA	2mA
Campo di misura Measuring range	0...200mV	0...20V	0...200V	0...20mA	0...2mA
	0...150mV	0...10V	0...150V	0...10mA	0...1mA
	0...100mV	0...5V	0...100V	0...5mA	
	0...60mV	1...5V	0...50V	4...20mA	
	0...50mV	2...10V			
Impedenza di ingresso Input impedance	≥ 20kΩ	≥ 200kΩ	≥ 4MΩ		
Caduta di tensione Voltage drop				≤ 2V	≤ 200mV

Programmable measuring range

Max. measuring range: 0...Un or 0...In

Min. measuring range: 0...0,25Un or 0...0,25In

It is possible to select any value between the lowest and the highest one obtaining the desired measuring range.

Input impedance / voltage drop: see table

Continuous overload: 1,2Un – 1,2In

Instantaneous overload: 2Un/5s – 2In/5s

Example of selectable measuring ranges:

USCITA ALIMENTAZIONE SENSORI (DG4Q0.P22)

Per alimentazione trasduttori esterni (tecnica 2 o 4 fili)

Isolata galvanicamente da ingresso e ausiliaria

Valore nominale: 24Vcc (non stabilizzati)

Variazione: 15...30Vcc

Corrente massima: 30mA

SENSOR SUPPLY OUTPUT (DG4Q0.P22)

To feed external transducers (2 or 4 wire technique)

Galvanically insulated from input and auxiliary supply

Rated value: 24Vdc (not stabilized)

Tolerance: 15...30Vcc

Maximum load: 30mA

ALIMENTAZIONE AUSILIARIA

Valore nominale Uaux ca: 24 - 48 - 115 - 230 - 240V

Variazione ammessa: ± 10% Uaux - 40...60V(Uaux 48V)

Frequenza nominale: 50Hz

Frequenza di funzionamento: 47...63Hz

Autoconsumo: 4,5VA

Valore nominale Uaux cc: 20...150Vcc - 150...250Vcc

Autoconsumo: 3W

Protezione contro l'inversione di polarità

AUXILIARY SUPPLY

Rated value Uaux ac: 24 - 48 - 115 - 230 - 240V

Tolerance: ± 10% Uaux - 40...60V(Uaux 48V)

Rated frequency: 50Hz

Working frequency: 47...63Hz

Rated burden: 4,5VA

Rated value Uaux dc: 20...150Vdc - 150...250Vdc

Rated burden: 3W

Protected against incorrect polarity

ISOLAMENTO

(EN/IEC 61010-1)

Categoria di installazione: III

Grado di inquinamento: 2

Prova di tensione alternata 2kV valore efficace 50Hz/1 min

Circuiti considerati: ingresso, alimentazione ausiliaria

Prova di tensione alternata 0,5kV valore efficace 50Hz/1 min

Circuiti considerati: ingresso, alimentazione ausiliaria verso uscita sensori

Prova di tensione alternata 2kV valore efficace 50Hz/1 min

Circuiti considerati: tutti i circuiti e massa

Prova di tensione a impulso 4kV 1,2/50µs 0,5J

Circuiti considerati: ingresso, alimentazione ausiliaria

INSULATION

(EN/IEC 61010-1)

Installation category: III

Pollution degree: 2

A.C. voltage test 2kV r.m.s. value 50Hz/1 min

Considered circuits: measure, supply

A.C. voltage test 0,5kV r.m.s. value 50Hz/1 min

Considered circuits: measure, supply, towards sensor supply output

A.C. voltage test 2kV r.m.s. value 50Hz/1 min

Considered circuits: all circuits and earth

impulse voltage test 4kV 1,2/50µs 0,5J

Considered circuits: measure, supply

COMPATIBILITA' ELETTROMAGNETICA

Prove di emissione in accordo con EN/IEC 61326-1

Prove di immunità in accordo con EN/IEC 61326-1

ELECTROMAGNETIC COMPATIBILITY

Emission tests according to EN/IEC 61326-1

Immunity tests according to EN/IEC 61326-1

CONDIZIONI AMBIENTALI

Temperatura di riferimento: 23°C ± 1°C

Temperatura di impiego: 5...40°C

Temperatura di funzionamento: -10...55°C

Variazione indice di classe: ±0,03% / °C

Temperatura di magazzinaggio: -40...70°C

ENVIRONMENTAL CONDITIONS

Reference temperature: 23°C ± 1°C

Nominal temperature range: 5...40°C

Limit temperature range: -10...55°C

Variation to the class index: ± 0,03% / °C

Limit temperature range for storage: -40...70°C

Umidità relativa: 20...80% senza condensa

Adatto all' utilizzo in clima tropicale

Massima potenza dissipata¹: ≤ 3,6W

¹Per il dimensionamento termico dei quadri

Relative humidity: 20...80% without condensing

Suitable for tropical climates

Max. power dissipation¹: ≤ 3,6W

¹For switchboard thermal calculation

CUSTODIA

Custodia: incasso (foratura pannello 92x45mm)

Frontale: 96x48mm

Profondità: 103mm

Connessioni: faston 6,3x0,8mm

Materiale custodia: makrolon autoestinguente

Grado di protezione (EN60529): IP50 (frontale), IP20 (morsetti)

Opzione: protezione frontale IP54

Peso: 400 grammi

HOUSING

Mounting: flush mounting (panel cutout 92x45mm)

Front frame: 96x48mm

Depth: 103mm

Connections: fast-on 6,3x0,8mm

Housing material: self-extinguishing makrolon

Protection degree (EN60529): IP50 (front frame), IP20 (terminals)

Option: IP54 front frame protection

Weight: 400 grams

UNITA' INGEGNERISTICA

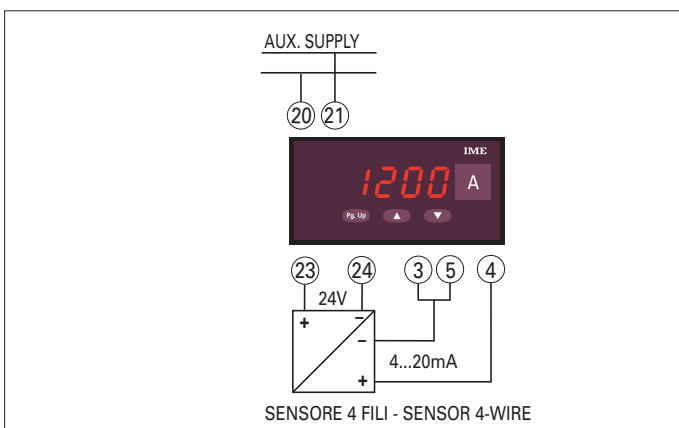
Etichette autoadesive, fornite con lo strumento

ENGINEERING UNIT

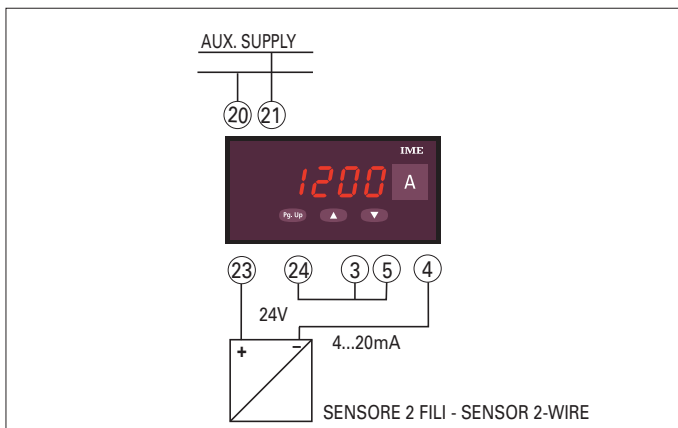
Adhesive label supplied with the meter

A	V	C	%	W	Hz
kW	MW	kg	bar	var	kvar
Mvar	R.P.M.	m/min	Giri/min	kg/cm ²	m ³ /h

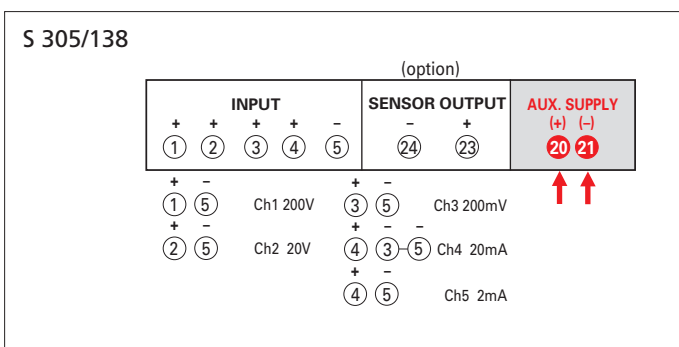
ESEMPI IMPIEGO CON SENSORE ESTERNO



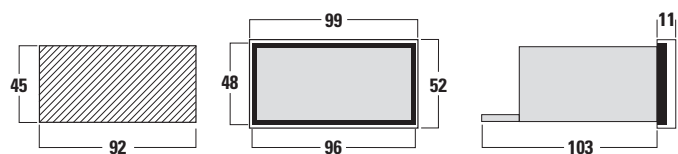
EXAMPLES USE WITH EXTERNAL SENSOR



SCHEMA D'INSERIZIONE WIRING DIAGRAM



DIMENSIONI DIMENSIONS



La I.M.E. S.p.A. si riserva in qualsiasi momento, di modificare le caratteristiche tecniche senza darne preavviso. / I.M.E. S.p.A. reserves the right, to modify the technical characteristics without notice.



**Indicateur numérique
de tension ou courant
continu et pulsé
96x48 mm**

Mesure et affichage de tension ou courant continu et pulsé unidirectionnel
Mesure et affichage de la vitesse, de dynamo tachymétrique
Affichage de toutes les grandeurs directement proportionnelles à l'entrée courant ou tension
5 calibres d'entrée 200mV / 20V / 200V / 20mA / 2mA
Etendue de mesure programmable 25...100% du calibre
Affichage programmable
Mémorisation de la valeur max. mesurée (réinitialisable)
Sortie 24Vcc pour alimentation capteur (température, pression, niveau, etc.)

**Direct and pulsating
voltage or current
digital meter
96x48 mm**

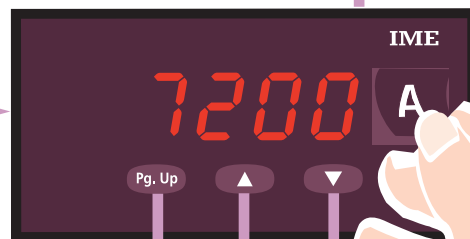
To measure and display unidirection and pulsating current or voltage
To measure and display speed, from tachometer dynamo
Display of any proportional quantity directly proportional to input current or voltage
5 input ranges 200mV / 20V / 200V / 20mA / 2mA
Programmable measuring range 25...100% of the range
Programmable display value
Storage of highest measured value (resettable)
External sensor supply output 24Vdc (temperature, pressure, level, etc.)

DGY10K



**Alimentation capteurs
Sensors supply
24Vcc/dc**

Mesure
Measure
50mV...200V
1...20mA



A	V	C	%	W	Hz
kW	MW	kg	bar	var	kvar
Mvar	R.P.M.	m/min	Giri/min	kg/cm ²	m ³ /h

Programmation

Programming

Calibre Range
Etendue de mesure Measuring range
Affichage Display

REFERENCE ORDERING CODE	ALIMENTATION AUXILIAIRE AUX. SUPPLY		SORTIE OUTPUT
	ca / ac	cc / dc	
2003 1488	24V	-	
2006 1488	115V	-	
2010 1486	230V	-	
2013 1488	240V	-	
2023 1488	48V	20...150V	
2025 1488	-	150...250V	
2003 1489	24V	-	
2006 1489	115V	-	24V cc/dc
2010 1489	230V	-	
2013 1489	240V	-	

AFFICHAGE

Type d'afficheur: LED rouges, 7 segments

Hauteur des chiffres: 14mm

N° de points d'affichage: 10.000 (4 chiffres)

Indication maximum: 9999

Unité de grandeur: personnalisable par l'utilisateur (étiquette adhésive)

Indication dépassement (affichage > 9999): indication " _ _ _ "

Echantillonnage de l'affichage: 3 lecture/s

Echantillonnage de la mesure: 3 lecture/s

Mémorisation de la valeur max. mesurée (réinitialisable)

Précision (par rapport au calibre mesuré): $\pm (0,25\% + K) + 1$ digit

$K = 0,2 \frac{\text{calibre}}{\text{étendue de mesure}}$ quand:

Calibre = 200mV ou. 20V ou. 200V ou. 20mA ou. 2mA

Etendue de mesure = fond d'échelle - début d'échelle (0-200V = 200, 4...20mA = 16)

Ex.: calibre 200mV

étendue de mesure 0...150mV

Précision = $0,25\% + 0,2 \frac{200}{150} = 0,5\% + 1$ digit

¹ avec entrée courant ou tension continu

PROGRAMMATION

Programmation des paramètres: 3 touches en face avant

Conservation des paramètres de configuration: mémoire permanente (EEPROM) sans batterie

Accès à la programmation: combinaison de touches

PARAMETRES PROGRAMMABLES

Calibres (Un / In): 200mV - 20V - 200V - 20mA - 2mA

Etendue de mesure: min. 0...0,25Un / In • max. 0...Un / In

AFFICHAGE

Début d'échelle: 0...9999 digit

Fond d'échelle: 0...9999 digit

Point décimal: 00.00 - 000.0 - 0000

Remise à zéro de la valeur max. mesurée

ENTREE

Raccordement: direct

Mesure: tension ou courant continu ou pulsé, valeur moyenne

Forme d'onde: continu ou pulsé avec fréquence ≥ 50 Hz

TENSION NOMINALE Un: 200mV – 20V – 200V

COURANT NOMINAL In: 20mA - 2mA

DISPLAY

Type of display: 7 segments, red LED's

Digit height: 14mm

N° of display points: 10.000 (4 digit)

Maximum display: 9999

Engineering unit: user-customizable (adhesive label)

Overrange indication (display > 9999): indication " _ _ _ "

Display update: 3 readings/s

Measure update: 3 readings/s

Storage of highest measured value (resettable)

Accuracy ¹ (referred to the measuring range): $\pm (0,25\% + K) + 1$ digit

$K = 0,2 \frac{\text{range}}{\text{measuring range}}$ where:

Range = 200mV or. 20V or. 200V or. 20mA or. 2mA

Measuring range = full scale - offset (0-200V = 200, 4...20mA = 16)

Ex.: range 200mV

measuring range 0...150mV

Accuracy = $0,25\% + 0,2 \frac{200}{150} = 0,5\% + 1$ digit

¹ with direct voltage or current input

PROGRAMMING

Parameters programming: front keyboard, 3 keys

Hold of configuration parameters: EEPROM memory, non volatile, no battery

Programming access: keys combination

PROGRAMMABLE PARAMETERS

Range (Un / In): 200mV - 20V - 200V - 20mA - 2mA

Measuring range: min. 0...0,25Un / In • max. 0...Un / In

DISPLAY

Offset: 0...9999 digit

Full scale: 0...9999 digit

Decimal point: 00.00 - 000.0 - 0000

Reset of highest measured value

INPUT

Connection: direct

Measurement: direct or pulsating current or voltage, average value

Waveform: direct or pulsating with frequency ≥ 50 Hz

VOLTAGE RATING Un: 200mV – 20V – 200V

CURRENT RATING In: 20mA - 2mA

Etendue de mesure programmable

Etendue de mesure max: 0...Un ou 0...In

Calibre minimum mesuré: 0...0,25Un ou 0...0,25In

Possibilité de sélectionner n'importe quelle valeur entre la plus haute et la plus basse pour obtenir l'étendue de mesure souhaitée

Impédance d'entrée / chute de tension: voir tableau

Surcharge permanente: 1,2Un - 1,2In

Surcharge instantanée: 2Un/5s - 2In/5s

Exemples d'étendues de mesure sélectionnables:

Calibre Range	200mV	20V	200V	20mA	2mA
Etendue de mesure Measuring range	0...200mV	0...20V	0...200V	0...20mA	0...2mA
	0...150mV	0...10V	0...150V	0...10mA	0...1mA
	0...100mV	0...5V	0...100V	0...5mA	
	0...60mV	1...5V	0...50V	4...20mA	
	0...50mV	2...10V			
Impédance d'entrée Input impedance	≥ 20kΩ	≥ 200kΩ	≥ 4MΩ		
Chute de tension Voltage drop				≤ 2V	≤ 200mV

Programmable measuring range

Max. measuring range: 0...Un or 0...In

Min. measuring range: 0...0,25Un or 0...0,25In

It is possible to select any value between the lowest and the highest one obtaining the desired measuring range.

Input impedance / voltage drop: see table

Continuous overload: 1,2Un - 1,2In

Istantaneous overload: 2Un/5s - 2In/5s

Example of selectable measuring ranges:

SORTIE ALIMENTATION CAPTEUR

Pour alimenter des transducteurs externes (technique 2 ou 4 fils)

Isolée galvaniquement de l'entrée et de l'alimentation auxiliaire

Valeur nominale: 24Vcc (non stabilisé)

Variation: 15...30Vcc

Courant maximum: 30mA

SENSOR SUPPLY OUTPUT (DG4Q0.P22)

To feed external transducers (2 or 4 wire technique)

Galvanically insulated from input and auxiliary supply

Rated value: 24Vdc (not stabilized)

Tolerance: 15...30Vcc

Maximum load: 30mA

ALIMENTATION AUXILIAIRE

Valeur nominale Uaux ca: 24 - 48 - 115 - 230 - 240V

Variation admissible: ± 10% Uaux - 40...60V(Uaux 48V)

Fréquence nominale: 50Hz

Fréquence de fonctionnement: 47...63Hz

Autoconsommation: 4,5VA

Valeur nominale Uaux cc: 20...150Vcc - 150...250Vcc

Autoconsommation: 3W

Protection contre l'inversion de polarité

AUXILIARY SUPPLY

Rated value Uaux ac: 24 - 48 - 115 - 230 - 240V

Tolerance: ± 10% Uaux - 40...60V(Uaux 48V)

Rated frequency: 50Hz

Working frequency: 47...63Hz

Rated burden: 4,5VA

Rated value Uaux dc: 20...150Vdc - 150...250Vdc

Rated burden: 3W

Protected against incorrect polarity

ISOLEMENT

(EN/IEC 61010-1)

Catégorie de l'installation: III

Degré de pollution: 2

Tension d'essai 2kV valeur efficace 50Hz/1 min

Circuits considérés: entrée, alimentation auxiliaire

Tension d'essai 0,5kV valeur efficace 50Hz/1 min

Circuits considérés: entrée, alimentation auxiliaire vers sortie capteur

Tension d'essai 2kV valeur efficace 50Hz/1 min

Circuits considérés: tous les circuits et la masse

Tension d'essai 4kV impulsions normalisée 1,2/50µs 0,5J

Circuits considérés: entrée, alimentation auxiliaire

INSULATION

(EN/IEC 61010-1)

Installation category: III

Pollution degree: 2

A.C. voltage test 2kV r.m.s. value 50Hz/1 min

Considered circuits: measure, supply

A.C. voltage test 0,5kV r.m.s. value 50Hz/1 min

Considered circuits: measure, supply, towards sensor supply output

A.C. voltage test 2kV r.m.s. value 50Hz/1 min

Considered circuits: all circuits and earth

impulse voltage test 4kV 1,2/50µs 0,5J

Considered circuits: measure, supply

COMPATIBILITÉ ELECTROMAGNETIQUE

Test d'émission selon EN/IEC 61326-1

Test d'immunité selon EN/IEC 61326-1

ELECTROMAGNETIC COMPATIBILITY

Emission tests according to EN/IEC 61326-1

Immunity tests according to EN/IEC 61326-1

CONDITIONS D'UTILISATION

Température de référence: 23°C ± 1°C

Température limite d'utilisation: 5...40°C

Température de fonctionnement: -10...55°C

Variation de l'indice de classe: ±0,03% / °C

Température de stockage: -40...70°C

ENVIRONMENTAL CONDITIONS

Reference temperature: 23°C ± 1°C

Nominal temperature range: 5...40°C

Limit temperature range: -10...55°C

Variation to the class index: ± 0,03% / °C

Limit temperature range for storage: -40...70°C

Humidité relative: 20...80% sans condensation

Adapté pour l'utilisation en climat tropical

Puissance max. dissipée': ≤ 3,6W

' Pour le dimensionnement thermique du coffret

BOITIER

Boîtier: encastré (découpe panneau 92x45mm)

Face avant: 96x48mm

Profondeur: 103mm

Raccordement: faston 6,3x0,8mm

Matériau du boîtier: makrolon autoextinguible

Degré de protection (EN60529): IP50 (face avant), IP20 (bornes)

Option: protection face avant IP54

Poids: 400 grammes

UNITE DE MESURE

Etiquettes adhésives, fournies avec l'appareil

Relative humidity: 20...80% without condensing

Suitable for tropical climates

Max. power dissipation': ≤ 3,6W

' For switchboard thermal calculation

HOUSING

Mounting: flush mounting (panel cutout 92x45mm)

Front frame: 96x48mm

Depth: 103mm

Connections: fast-on 6,3x0,8mm

Housing material: self-extinguishing makrolon

Protection degree (EN60529): IP50 (front frame), IP20 (terminals)

Option: IP54 front frame protection

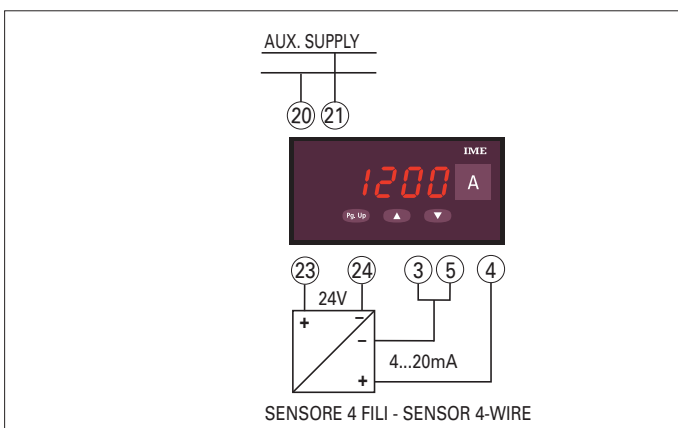
Weight: 400 grams

ENGINEERING UNIT

Adhesive label supplied with the meter

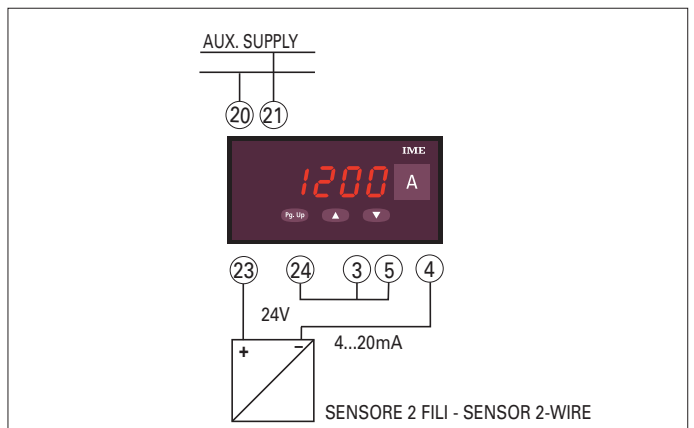
A	V	C	%	W	Hz
kW	MW	kg	bar	var	kvar
Mvar	R.P.M.	m/min	Giri/min	kg/cm ²	m ³ /h

EXEMPLE D'UTILISATION AVEC CAPTEUR EXTERNE

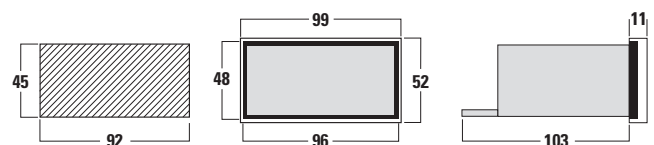
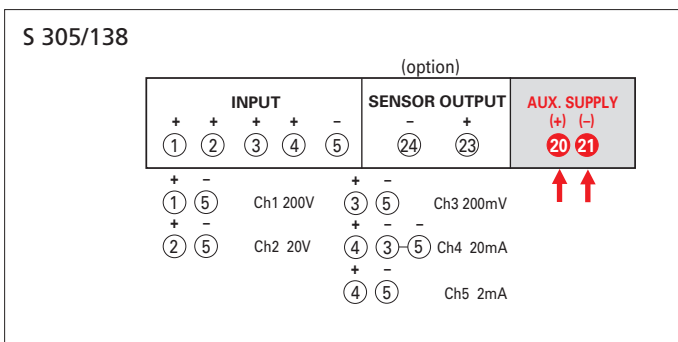


SCHEMAS DE RACCORDEMENT WIRING DIAGRAM

EXAMPLES USE WITH EXTERNAL SENSOR



DIMENSIONS DIMENSIONS



IMESYS se réserve à chaque moment de modifier les caractéristiques sans préavis écrit / IMESYS reserves the right to modify the technical characteristics without notice.