# CARLO GAVAZZ

Digital Panel Meters

8.8

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Control

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DC or AC Current and Voltage Temperature and Resistance Frequency and Speed











# What is and Why use the Digital Panel Meter

In the manufacturing industry and in the process control applications, it is of vital importance the monitoring and the control by means of alarms of several physical variables. In addition analogue or serial retransmission of the measured value can be required in order to provide a feedback to the system which controls the process, or to log the history of the monitored plant. Whatever are your needs and requirements in the process you have to control, Carlo Gavazzi has the right solution. Should you need a simple indicator, a controller for every kind of variable, or a more complex instrument - able for example to manage four alarms, to be connected in a RS485 network, to linearise the non-linear input signals and to show different conditions with different display colours - we have the panel meter that better suits your demands. The range is completed with a universal signal conditioner, whose flexible and advantageous modular architecture is common to the other medium and high-end panel meters.



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## The charactersitics

Wide range of available inputs for all the applications: voltage, current, frequency, resistance, temperature.

Modular architecture available in the medium and high-end meters, making them flexible and easy to configure.

Different type of outputs available to retransmit the measured variable: analogue signal, alarm contacts or serial port

Easy programmability by means of a handy keypad. The more complex instruments are configurable by means of dedicated software tool.

3, 3 1/2 or 4-digit LED display with alarm and over range indication.





USC: 5-slot module holder

# A new concept of Modularity

- Maximum in-field flexibility
- Quick assembly and configuration
- Easy future expansion

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### Measurement inputs

0.2-2-20mA AC/DC 0.2-2-20mA AC/DC + excitation output 0.2, 2, 5A AC/DC; 20, 200, 500V AC/DC TC: J-K-S-T-E, Pt100-250-500-1000, Ni100 Ω: 0.02, 0.2, 2, 20kΩ UDM35: 3 1/2-digit read-out, or 3-digit + dummy 0 read-out

UDM40: 4-digit read-out, 3-colour display



**Power Supply** 

90 to 260V AC/DC 18 to 60V AC/DC

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**Display Base** 

**Communication Port** RS485 and RS232 ports

#### **Outputs**

Analogue outputs: Max 1 analogue output 0 to 20mA and 0 to 10VDC

Alarm outputs:

- 1 relay output
- 2 relay outputs 2 relay + 2 open collector outputs 4 relay outputs.





# Features and Benefits of the Digital Panel Meters

#### DI3 DIN, DI3 72, LDI3

- Indicators for DIN-rail and panel mounting
- Multi input capabilities
- Easy product configuration

#### **MDM40**

- Two-alarm tachometer
- Dual input and multifunction capability
- Management of all available sensors
- Reverse speed control

#### LDI35, LDM35H

- Multi range and multi signal indicator and controller
- Powerful scaling capability
- Universal power supply (LDM35H only)

#### **UDM35**

- Powerful performance
- Plug and play modules
- Maximum in-field flexibility
- Possibility to expand the inputs/outputs only when really needed by the application

#### UDM40

- State of art performances
- Maximum in-field flexibility
- Input signal linearization capability
- 3-colour display

#### USC

- Universal signal conditioner
- Maximum in-field flexibility
- Input signal linearization capability
- Programming and network software

#### DI3 DIN, DI3 72, LDI3

The instruments are easily configurable by dip-switches. That allow to set the position of the decimal point and the primary of the current transformer or to connect the potential transformer.





#### **UDM40 Color Display**

*RED* - High priority, abnormal condition

**AMBER** - Low priority, abnormal condition

GREEN - Normal condition

#### LDI35, LDM and UDM

In the process control applications, it is a mandatory condition to be able to manage signals such as "mA and volts" which are proportional to pressure or other variables being measured. The LDI35/LDM/UDM series answers to this request with *powerful scaling and filter* in order to show the variable in a stable and reliable way on the display.





# The available modules

Туре	Channels	UDM35	UDM40	USC	OrderingCode
UDM35 base					—— BD35
UDM40 base			<b>_</b>		—— BD40
USC base				<b>_</b>	— BDXX
AC/DC inputs: 200µA, 2mA, 20mA, 200mV, 2V, 20V	— 1 —			_ <b>_</b>	BQLSX
AC/DC inputs: 200µA, 2mA, 20mA, 200mV, 2V, 20V + excitation output	t — 1 —				BQLSE
AC/DC inputs: 200mA, 2A, 5A, 20V, 200V, 500V	— 1 —				— BQHSX
Inputs: 20Ω, 200Ω, 2kΩ,20kΩ; TC: J-K-S-T-E, Pt100-250-500-1000, Ni100 —	— 1 —		<b>_</b>		BQTRX
Analogue output: 0 to 20mA, 0 to 10V DC	<u> </u>			_ <b>_</b>	— BOAV
Relay output	— 1 —			_ <b>_</b>	BOR1
Relay output	— 2 —			_ <b>_</b>	— BOR2
Outputs: 2 relays + 2 open collectors	— 4 —			_ <b>_</b>	BOR4
Relay output	— 4 —			<b>_</b>	— BOR5
RS485 communication port	— 1 —		<b>\</b>		— BRSX
RS232 communication port	— 1 —		<b>_</b>	_ <b>_</b>	— BRSY
18 to 60V AC/DC power supply					BPL
90 to 260V AC/DC power supply					ВРН

	UDI	M35		140				USC		
Slot —	Α	В	C	D		Α	В	C	D	E
Inputs/Outputs	1	2	3	4		1	2	3	4	5
Measurement inputs: LSX, LSE, HSX, TRX										_
RS485 communication port: SX										_
RS232 communication port: SY										_
Analogue output (*): AV							_ <b>_</b>			_
Relay and open collector outputs: R1, R2, R4, R5										_
Power supply: H, L					_					_

(\*) Note: Max one analogue output module



![](_page_8_Figure_0.jpeg)

![](_page_9_Picture_0.jpeg)

![](_page_9_Picture_1.jpeg)

![](_page_9_Picture_2.jpeg)

#### DI3 DIN DI3 72 LDI3

DI3 DIN

With just four basic models this product family is the ideal solution for the panel builders.

The product philosophy meets the panel builder and distributor requests in terms of features and flexibility granting therefore a consistent stock reduction.

DI3 72

LDI3

![](_page_9_Picture_6.jpeg)

![](_page_9_Figure_7.jpeg)

Description	3-DGT µP-based indicator
Housing (H x W x D)	89 x 53.5 x 58.8 mm (DIN)
	72 x 72 x 75 mm (72)
	48 x 96 x 83 mm (LDI3)
Mounting	DIN rail, panel mounting (72, LDI3)
Display type	3 DGT, red LED
Variables on display	YES
Measured signals	1A/60mV/100-500VDC
-	1A/100VAC, 5A/500VAC
	1 to 1000Hz
Type signals	DC or AC
Engineering units	mA, A, V, Hz
Accuracy	±(0.5%FS, + 1DGT)
Temperature drift	±350ppm/°C
Sampling rate	1 time/s
Command inputs	NO
Outputs: Alarm	NO
Analogue	NO
Serial	NO
Signal/display scaling	YES (CT and PT sel. by dip-switch)
Power supply	24V, 48V, 115V, 230V AC
Approvals	CE, DI3 72:c CSA us;
	LDI3: c CSA us, UR
Protection degree	IP40 (DIN); IP50 (72), IP50
	(LDI3) IP65 (LDI3 on request)

![](_page_10_Picture_0.jpeg)

#### **LDI35**

The family is available in two basic versions:
LDI35, simply as indicator;
LDI35, up to 1 alarm relay output.
On each basic model it is possible to have a specific version for:

- process applications with 2-20mA and 0.2-20V-200V • input;
- panel builders with 2-5A and 200-500VAC/DC input. •

![](_page_10_Picture_8.jpeg)

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The range is completed by a multi probe temperature controller and ohmmeter.

	LDI35				
Description	3 1/2-DGT µP-based indicator				
·	and controller				
Housing (H x W x D)	48 x 96 x 83 mm				
Mounting	Panel mounting				
Display type	3 1/2-DGT or 3DGT+ dummy 0, red LED				
Variables on display	YES				
Measured signals	(2-20mA, 20-200V); (2-5A, 200-				
-	500V); (TC: J-K-S-T-L, Pt100-1000,				
	Ni100, 200-2000 Ω)				
Type signals	DC and AC				
Engineering units	Label set				
Accuracy	DC: ±(0.3%FS + 1DGT)				
-	AC: ±(0.5%FS + 1DGT)				
Temperature drift	±200ppm/°C				
Sampling rate	4 times/s				
Command inputs	NO				
Outputs: Alarm	Up to 1				
Analogue	NO				
Serial	NO				
Other available characteristics	Signal/display scaling. Digital				
	filter, Peak and valley. Burn-out				
	control on temperature input				
Power supply	24, 48, 115, 230VAC, 9 to 32VDC,				
	40 to 150VDC				
Approvals	CE, c CSA us, UR				
Protection degree	IP65 (on request)				

![](_page_10_Figure_11.jpeg)

![](_page_11_Picture_0.jpeg)

	1	DM35H		
Description		3 1/2-DGT µP-based indicator and controller		
Housing (H :	x W x D)	48 x 96 x 83 mm		
Mounting	•	Panel mounting		
Display type	<u>;</u>	3 1/2-DGT or 3-DGT + dummy 0, red LED		
Variables on	display	YES		
Measured si	gnals	(0.2-2-20mA, 0.2-2-20V); (0.2-2-5A, 20-200-500V)		
Type signals		DC and AC TRMS		
Engineering	units	Self sticking label set		
Accuracy		DC: ±(0.3%RDG + 3DGT) AC: ±(0.5%RDG + 3DGT)		
Temperature	drift	±150ppm/°C		
Sampling rate		5 times/s		
Command in	puts	NO		
Outputs:	Alarm	Up to 2		
	Analogue	ŇŎ		
	Serial	NO		
Other availa	ble characteristics	Signal/display scaling. Digital filter. Peak and valley.		
Power supp	ly	90 to 260V AC/DC, 18 to 60V AC/DC		
Approvals		CE, c CSA us and UR pending		
Protection d	earee	IP65		
i i o coocioni a				

- The family is available in two basic versions:LDM35H, simply indicator;LDM35H, up to 2 alarm relay outputs. Both of them provided with universal power supply. On each basic model it is possible to have a specific version for:

LDM35H

- process applications with 0.2-2-20mA and •
- 0.2-2-20V DC/AC input;

•	panel builders with 0.2-2-5A and 20-200-500V AC/DC
	input.

Furthermore TRMS method improves significantly the accuracy of the measurement on both distorted current and voltage.

![](_page_11_Figure_9.jpeg)

⊼r Mar

![](_page_11_Picture_10.jpeg)

In-Out

![](_page_11_Picture_12.jpeg)

![](_page_11_Picture_13.jpeg)

![](_page_11_Picture_14.jpeg)

### Hardware

Functions

![](_page_12_Picture_0.jpeg)

**MDM40** 

MDM40 tachometer is an extract of flexibility and performances in only one product.

This instrument is suitable to be used in all applications thanks to:

- the capability to measure a very slow speed/ frequency (0.001 Hz);
- · the management of pulse signals from proximity switches,

		MDM40		
Description		4-DGT multi-range controller for		
		pulse signal		
Housing (H	x W x D)	48 x 96 x 124 mm		
Mounting		Panel mounting		
Display typ	e	4 DGT, red LED		
Variables o	n display	YES		
Measured s	signals	Speed, frequency, rate, period		
Type signal	s	DC or AC		
Engineering	units	Label set		
Accuracy		±(0.001% RDG + 3DGT)		
Temperatur	e drift	±100ppm/°C		
Sampling ra	ate	Programmable		
Command i	nputs	1 (display hold, key pad lock)		
Outputs: Alarm		2		
	Analogue	1 (20 mA, 10 VDC)		
	Serial	RS485		
Other avail	able characteristics	Signal/disp. and analogue out. scaling.		
		Digital filter.		
		Peak and valley.		
Power sup	ply	24,48,115,120,230,240 VAC		
· · · ·		9 to 32, 40 to 150 VDC		
Approvals		CE, UR		
Protection	degree	IP65		

![](_page_12_Picture_7.jpeg)

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photo switches, NAMUR proximities, encoders and magnetic pick-up's;

• the rate-tacho-frequency-period meter functions.

The two independent inputs, with proper parameter programming are able to measure rate, speed, frequency and period variables using mathematical formulas like: A, B, 1/A, A/B, A-B, (A-B)/B, B/(A+B) and revers speed control.

![](_page_12_Figure_11.jpeg)

![](_page_13_Picture_0.jpeg)

![](_page_13_Picture_1.jpeg)

![](_page_13_Picture_2.jpeg)

#### **UDM35**

UDM 35 is a universal high-tech instrument that has been developed to meet the most advanced application needs. UDM35 offers to the user many solutions and advantages that can be summarized in:

- quick assembly and maintenance using plug and play modules;
- easy and quick parameter programming and parameter cloning on other UDM's by means of UdmSoft or PC Hyperterminal;

	JDM35			
Description	3 1/2-DGT µP-based controller			
	with modular housing			
Housing (H x W x D)	48 x 96 x 105 mm			
Mounting	Panel mounting			
Display type	3 1/2-DGT or 3-DGT + dummmy 0, red LED			
Variables on display	YES			
Measured signals	(0.2-2-20mA, 0.2-2-20V); (0.2-2-5A, 20-200-500V); (TC: J-K-S-T-E, RTD, Ω)			
Type signals	DC and AC TRMS			
Engineering units	Self sticking label set			
Accuracy	DC: ±(0.1%RDG + 3DGT)			
	AC: ±(0.3%RDG + 3DGT)			
Temperature drift	±150ppm/°C			
Sampling rate	5 times/s			
Command inputs	1 (display hold, key pad lock or latch alarm reset)			
Outputs: Alarm	Up to 4			
Analogue	1 (20mA,10VDC)			
Serial	RS485, RS232			
Other available characteristics	Signal/display scaling. Analogue			
	output scaling. Digital filter, Peak			
	and Valley. Burn-out control on			
	temperature inputs only.			
Power supply	90 to 260 AC/DC,			
and the second second	18 to 60V AC/DC			
Approvals	CE; c CSA us and UR pending			
Drotastian degree				

![](_page_13_Picture_8.jpeg)

- powerful variable control by means of up to 4 alarms;
- remote control facilities like analogue output and RS485, RS232 communication ports.

The different type of alarm controls:

· up-down functions with automatic reset;

- up-down functions with manual reset;
- down with disable function at power-on. These alarms can be

combined so to have up to 4 abnormal steps notified as pre-alarms and alarms.

al1 🔻	al2 🔻	al3 🔻	al4 🔻
	UDM	Universal Digital	Meter

![](_page_13_Figure_17.jpeg)

![](_page_14_Picture_0.jpeg)

#### **UDM40**

UDM40 has the same basic characteristics of UDM35. Other benefits can be summarized as follows:

- display colour adaptable to other existing instruments by means of a 3-colour choice;
- management of non linear signals coming from special process transmitters using a 16-point linearization capability;
- reliable information to the process, working out a complex or disturbed signal by a programmable input integration time and/or a smart digital filter.

#### **Controller UDM40**

Description	4-DGT µP-based controller with
	modular housing
Housing (H x W x D)	48 x 96 x 105 mm
Mounting	Panel mounting
Display type	4-DGT, coulor LED
Variables on display	YES
Measured signals	(0.2-2-20mA, 0.2-2-20V); (0.2-2-5A,
	20-200-500V); (TC: J-K-S-T-E, RTD, Ω)
Type signals	DC and AC TRMS
Engineering units	Self sticking label set
Accuracy	DC: ±(0.1%RDG + 3DGT)
	AC: ±(0.3%RDG + 3DGT)
Temperature drift	±150ppm/°C
Sampling rate	5 times/s
Command inputs	1 (display hold, key pad lock or
	latch alarm reset)
Outputs: Alarm	Up to 4
Analogue	1 (20mA, 10VDC)
Serial	RS485, RS232
Other available characteristics	Signal/display scaling. Analogue
	output scaling. Digital filter. Integra-
	tion time. Peak and valley. Burn-
	out control on temp. inputs only.
	Linearization. Traffic lights function.
Power supply	90 to 260 AC/DC,
	18 to 60V AC/DC
Approvals	CE; c CSA us and UR pending
Protection degree	IP65

![](_page_14_Picture_8.jpeg)

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Alarm status given at a glance using the easy traffic lights principle. The instrument may show the alarm status based on a sequence of colours that can be programmed by the user.

![](_page_14_Figure_10.jpeg)

Hardware

Functions

In-Out

![](_page_15_Picture_0.jpeg)

![](_page_15_Picture_1.jpeg)

#### USC

The winning point of the USC "Universal Signal Conditioner" is its architecture. It is formed by a module holder on which it is possible to plug in modules with different purposes: power supply-measurement-alarm control-signal retransmission. The different combination of the modules allows to have a simple signal conditioner or a very sophisticated controller with communication port. The main advantages given by USC can be summarized as follows:

Description	uP-based signal conditioner with
Description	modular housing
Housing (H x W x D)	44 x 113 x 107 mm
Mounting	DIN-rail mounting
Display type	NO
Variables on display	NO
Measured signals	(0.2-2-20mA, 0.2-2-20V); (0.2-2-5A,
C C	20-200-500V); (TC: J-K-S-T-E, RTD, Ω)
Type signals	DC and AC TRMS
Engineering units	NO
Accuracy	DC: ±(0.1%RDG + 3DGT)
	AC: ±(0.3%RDG + 3DGT)
Temperature drift	±150ppm/°C
Sampling rate	5 times/s
Command inputs	1 (latch alarm reset)
Outputs: Alarm	Up to 4
Analogue	1 (20mA, 10VDC)
Serial	RS485, RS232
Other available characteristics	Signal/display scaling. Analogue
	output scaling. Digital filter.
	Integration time. Peak and valley.
	Burn-out control on temp. inputs
	only. Linearization up to 16 points.
Power supply	90 to 260 AC/DC,
	18 to 60V AC/DC
Approvals	CE; c CSA us and UR pending
Protection degree	IP20

![](_page_15_Picture_5.jpeg)

The LEDs on modules show the power supply and communication status all the time.

Control

- easy and quick parameter programming and parameter cloning on other USC's by means of UscSoft or PC Hyperterminal;
- powerful variable control by means of up to 4 alarms;
- remote control facilities like analogue output and RS485, RS232 communication ports;
- management of non linear signals coming from special process transmitters using a 16-point linearization capability;
- reliable information to the process, working out a complex or disturbed signal by a programmable input integration time and/or smart digital filter.

![](_page_15_Figure_12.jpeg)

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Types Description Seri line Housing Fror Signal input RS2	SIU-PC85 ial communication adapter nt: 65x80mm 232 irire comm.	SIU-DIN 8585 Serial communication line amplifier, driver Front: 89x71.5mm RS485, RS422	SIU-DIN.RLY Serial communication relay outputs Eront: 89x71 5mm	PSU-DIN (DC/AC) Power supply unit DC to AC	PSU-DIN (AC/DC)
Types Description Seri line Housing Fror Signal input RS2	SIU-PC85 ial communication adapter nt: 65x80mm 232 irire comm.	SIU-DIN 8585 Serial communication line amplifier, driver Front: 89x71.5mm RS485, RS422	SIU-DIN.RLY Serial communication relay outputs Eront: 89x71 5mm	PSU-DIN (DC/AC) Power supply unit DC to AC	PSU-DIN (AC/DC)
Description Seri line Housing Fror Signal input RS2	ial communication adapter nt: 65x80mm 232 ire comm.	Serial communication line amplifier, driver Front: 89x71.5mm RS485, RS422	Serial communication relay outputs	Power supply unit	Power supply unit
Housing From Signal input RS2	nt: 65x80mm 232 rire comm.	Front: 89x71.5mm RS485, RS422	Front: 80v71 5mm	0010110	AC to DC
Signal input RS2	232 rire comm.	RS485, RS422		Front: 89x71.5mm	Front: 89x71.5mm
./	rire comm.		RS485, RS422	N.A.	N.A.
Working mode 2-w		2 or 4-wire comm.	2 or 4-wire comm.	N.A.	N.A.
Line Bias N.A.	•	YES	N.A.	N.A.	N.A.
Line termination N.A.		YES	YES	N.A.	N.A.
Connections 9-pc	ole, female	Screw terminal block	Screw terminal block	Screw terminal block	Screw terminal block
Output RS4	122 185	RS422	4 relays 5A, 250V	24VDC (max. 250mA) 48VDC (max. 125mA) 115VDC (max. 50mA)	5VDC (max. 200mA) 12VDC (max. 100mA) 24VDC (max. 50mA)
Working mode	ire comm	1-wire comm	SPDT contacts	Switching mode	Ry transformer
Lino Bias VES		VEC		N A	
Line termination VES		VES	N.A.	N.A.	N.A.
Connections Ser	ow torminal block	ILJ Scrow torminal block	N.A. Scrow torminal block	N.A. Scrow torminal block	N.A. Scrow torminal block
Paud rato	410200 Paud	May 10200 Paud	May 0600 Paud		
Datu Tale Ivia	inputs/outputs			N.A. Output: by fuco	Output: electronic
Indication Row		All inputs/outputs	N.A. Dowor on	Dulpul. by Tuse	Douput. electronic
(by means of LEDs)	ver-un	FUWEI-UII	Comm status	FUWEI-UII	FUWEI-UII
(by means of LEDS) Data	a-Sireann		Output status		
Inculation	ut/output: 2kV	Input/output: N A	Input/output: 2kV	ΝΛ	Input/output: /k//
insulation inpu	ut/output. 2KV	input/output. N.A.	input/output. 2KV	N.A.	input/output. 4KV
Inpu	ut/output and				
Operating temperature 0 to			D to 150°C (D L		
	0 + 50 C (R.H.	0.00 + 50 C (R.H. < 0.00)	0.10+30 C (R.H.	0.00 + 50 C (R.H. < 0.00)	0.00 + 50 C (R.H. < 0.00% non condens
≤90	7% HOH COHUERS-		≤90% 11011 CONDENS-		≤90% HOH COHDeHS-
Storage torgenerature 10					
Storage temperature -10	10 +00 C (K.H. 0( non condensing)	- 10 10 +00 C (R.H.	- 10 10 +00 C (K.H.	-10 10 +00 C (K.H.	- 10 10 +00 C (K.H.
S90	% non condensing)	$\leq$ 90% non condensing)	$\leq$ 90% non condensing)	$\leq 90\%$ non condensing)	$\leq$ 90% non condensing)
Included Set 1.8r 9-pc pow	ole connectors, ver supply cable	N.A.	N.A.	N.A.	N.A.
Other characteristics Wrotion	ong-line connec- and full overvolt-	Dual purpose: dis- tance increase by	4 relay outputs to be driven by an RS485	Stabilised AC voltage output. Stability: <4%	Stabilised DC voltage output. Stability: <0.5%
Rev Cap	erse conversion ability.	work increase	communication port	Un @ max. current	Un @ max. current Non-stabilised DC voltage outputs: 2V- 20V-30VDC
Power supply input 24V	AC, 48VAC	24VAC, 48VAC	24VAC, 48VAC	80 to 240VDC	24VAC, 48VAC
115	VAC, 230VAC	115VAC, 230VAC	115VAC, 230VAC	18 to 60VDC 9 to 16VDC	115VAC, 230VAC
Protection degree IP20	0	IP40	IP40	IP40	IP40

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7

17

![](_page_17_Picture_0.jpeg)

Types	TADK	TADK2	TAD 2	TAD 3	TAD 4
Class	0.5	0.5	0.5/ 1/ 3	0.5/1	0.5/1
Bus-bar size	Wounded primary	25x5 mm fixed bar	Ø 22 mm	21x14 or 31x11 mm	32x16, 41x11, Ø 32 mm
Dimensions (HxWxD)	115.5x75x44 mm	115.5x75x44 mm	98.5x58x44 mm	98.5x58x44 mm	75x115.5x44 mm
Standards	IEC 60185/EN 60185	IEC 60185/EN 60185	IEC 60185/EN 60185	IEC 60185/EN 60185	IEC 60185/EN 60185
Accuracy class	Class 0.5	Class 0.5	Class 0.5 1 3	Class 0.5 1	Class 0.5 1
depending on the	Burden	Burden	Burden	Burden	Burden
burden output	VA	VA	VA VA VA	VA VA	VA VA
Primary current at	1 A 10	1 A 10	40 A 3	100 A 3	100 A 3
rated output	5 A 10	5 A 10	50 A 3	150 A 3 4	150 A 3
current of 1A/5A	10 A 10	10 A 10	60 A 3	200 A 3 4	200 A 4
	15 A 10	15 A 10	80 A 3	250 A 5 8	250 A 6
	25 A 10	25 A 10	100 A 3 4	300 A 5 8	300 A 6
	40 A 10	40 A 10	150 A 3 4 6	400 A 6 10	400 A 10
		50 A 10	200 A 3 4 6	500 A 6 10	500 A 10
		60 A 10	250 A 5 8 10	600 A 6 10	600 A 10
		80 A 10	300 A 5 8 10		800 A 10
		100 A 10			
		150 A 10			
		200 A 10			
		250 A 10			
Types ———	TAD 6	TAD 8	TAD 12	TACO 110	TACO 200
Class	0.5/1	0.5/1/5P10	0.5/1/5P10	0.5/1/5P10	0.5/1/5P10
Bus-bar size	55x22, 65x20, Ø 52 mm	82x32 or 65x34 mm	127x51 or 102x53 mm	Max. Ø 110 mm	Max. Ø 200 mm
Dimensions (H x W x D)	105x145x44 mm	140x120x55 mm	183x170x65 mm	183x170x 65 mm	295x280x45 mm
Standards	IEC 60185/EN 60185	IEC 60185/EN 60185	IEC 60185/EN 60185	IEC 60185/EN 60185	IEC 60185/EN 60185
Accuracy class	Class 0.5 1	Class 0.5 1 5P10	Class 0.5 1 5P10	Class 0.5 1 5P10	Class 0.5 1 5P10
depending on the	Burden	Burden	Burden	Burden	Burden
burden output	VA VA	VA VA VA	VA VA VA	VA VA VA	VA VA VA
Primary current at	400 A 6 12	400 A 4 8 5	800 A 15 30 10	800 A 15 30 10	1000A 15 30 10
rated output	500 A 6 12	500 A 6 12 5	1000A 20 40 10	1000A 20 40 10	1500A 15 30 10
current of 1A/5A	600 A 10 20	600 A 10 20 5	1200A 30 60 10	1500A 40 80 10	2000A 15 30 10
	800 A 10 20	800 A 15 30 5	1500A 40 80 10	2000A 50 100 10	2500A 40 80 10
	1000A 20 40	1000A 20 40 5	2000A 50 100 10	2500A 60 120 10	3000A 40 80 10
	1200A 20 40	1200A 30 50 5	2500A 60 120 10	3000A 80 160 10	4000A 50 100 10
	1500A 30 60	1500A 40 60 5	3000A 80 160 10	4000A 100 200 10	5000A 50 100 10
	2000A 30 60	2000A 50 80 5	4000A 100 200 10		6000A 50 100 10
		2500A 60 100 5			

Control

Cable/Bus-bar type current transformers. Standard output 5A (1A on request). Rated primary currents from 40A to 6000A. DIN-rail or panel mounting. Current transformer 1-phase AC; operating frequency: 40 to 60 Hz; max system voltage: 0.72 kV; rated insulation level: 3kV/1min @ 50Hz; security factor:  $\leq 5$ ; rated secondary current: 5A standard (1A on request).

![](_page_17_Picture_3.jpeg)

Accuracy of the main variables

![](_page_18_Picture_1.jpeg)

![](_page_18_Picture_2.jpeg)

Display digits and (sampling rate)

![](_page_18_Picture_4.jpeg)

![](_page_18_Picture_5.jpeg)

![](_page_18_Picture_6.jpeg)

3-colour display

Excitation output

![](_page_18_Picture_8.jpeg)

"Traffic light" function. Alarm level connected to the display colour

Pulse measuring input

Peak and valley function

![](_page_18_Picture_11.jpeg)

Digital filter with action on the display and signal outputs

Integration time

![](_page_18_Picture_15.jpeg)

Linearization

![](_page_18_Picture_17.jpeg)

![](_page_18_Picture_18.jpeg)

Instantaneous variables displaying

![](_page_18_Picture_20.jpeg)

Analogue output for variable retransmission

![](_page_18_Picture_22.jpeg)

Alarm outputs for variable control

![](_page_18_Picture_24.jpeg)

Digital inputs for external command

![](_page_18_Picture_26.jpeg)

![](_page_18_Picture_27.jpeg)

Communication port

#### **OUR SALES NETWORK**

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#### **OUR PRODUCTION SITES**

Carlo Gavazzi Industri A/S Hadsten - DENMARK Tel: +45 89 60 6100

![](_page_19_Picture_20.jpeg)

Inductive and Capacitive Proximity Sensors in full metal and plastic housings. Photoelectric Sensors. Level Sensors: Optical, Conductive and Capacitive. Ultrasonic Sensors and Magnetic Switches. Limit Switches. Carlo Gavazzi Ltd Zejtun - MALTA Tel: +356 23601 100

![](_page_19_Picture_23.jpeg)

Solid States Relays. Versions for PCB and panel mounting. AC Semiconductor Motor Controllers Soft starters. Industrial and PCB Relays. Carlo Gavazzi Controls SpA Belluno - ITALY Tel: +39 0437 931 000

![](_page_19_Picture_26.jpeg)

Energy Management. Timers and Monitoring Relays. Digital Panel Meters and Temperature Controllers. SAIET Elettronica SpA Castel Maggiore (BO) - ITALY Tel: +39 051 417 8811

![](_page_19_Picture_29.jpeg)

Safety Modules, Safety Magnetic Sensors, Safety Mats, Safety Light Curtains, Intrinsic Safety, Electrical Protections Carlo Gavazzi Industri A/S Hadsten - DENMARK Tel: +45 89 60 6100

![](_page_19_Picture_32.jpeg)

Dupline Field and Installation Bus. Building Automation Systems.

Further information on www.carlogavazzi.com/ac

![](_page_19_Picture_35.jpeg)

![](_page_19_Picture_36.jpeg)