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UNIVERSAL MEASURING INSTRUMENTS

TNM96 VAF-O



Class 1
True RMS measurement
Onsite programmable:

CT ratios and PT ratios
Secondary CT 1A / 5A
System configuration 3PH4W / 3PH3W and single phase

LED Display: 3 lines 3 digits
Run hour, ON hour and number of interruptions
RPM Measurement
Storage of parameters possible
Parameter screen recall
Onsite selection of auto scroll / fixed screen

Type	System	Auxiliary supply	
TNM96VAF-O	Trifásico Programable 3 ó 4 hilos	40 - 300V AC / DC +/-5% 20V - 40V AC / 20 - 60V DC	

TNM96P - Powe multimeter



Class 1
Onsite programmable:

CT ratios and PT ratios
Secondary CT 1A / 5A
Secondary PT from 100VLL until 500LL
System configuration 3PH4W / 3PH3W and single phase

Onsite selection of auto scroll / fixed screen
Four function keys
RPM Measurement
True RMS measurement
LED Display: 3 lines 4 digits
Storage of parameters possible

Type	Auxiliary supply	
TNM96P	40 - 300V AC / DC +/-5% 20V - 40V AC / 20 - 60V DC	

TNM96E - Energy multimeter



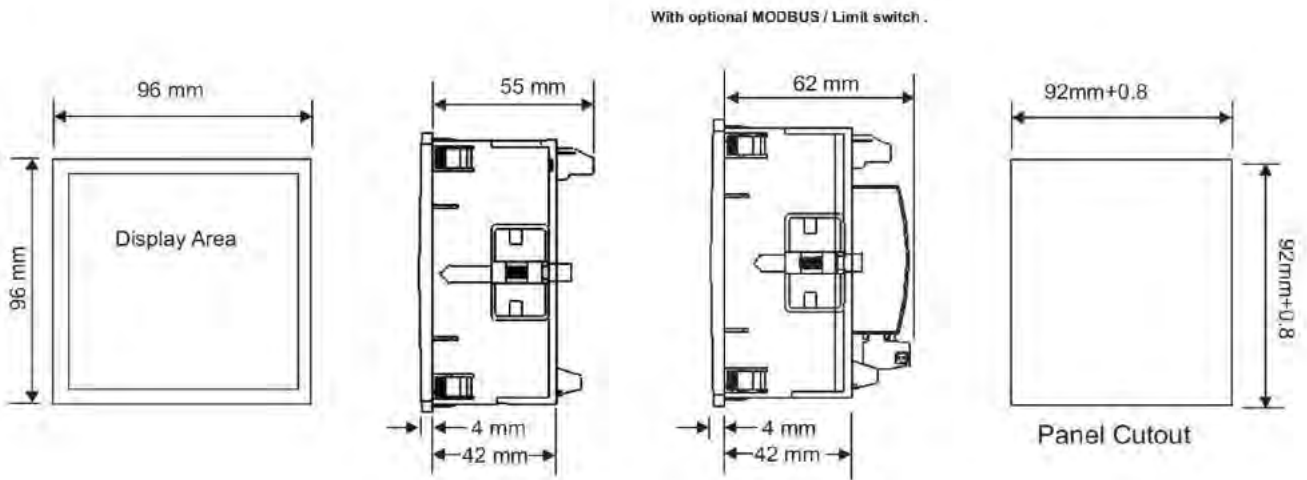
Class 1
 True RMS measurement
 Onsite programmable: CT ratios and PT ratios
 Secondary CT 1A / 5A
 Secondary PT
 3PH3W or 3PH4W

Four function keys
 RPM Measurement
 Demand measurement
 Energy measurement (import and export)
 Programmable energy format and energy rollover count
 Storage of parameters possible
 LED Display: 3 lines 4 digits
 Onsite selection of auto scroll / fixed screen

Optional: 1 pulse output
 Modbus output

Type	Auxiliary supply
TNM96E	40 - 300V AC / DC +/-5% 12V - 48V DC

Dimensions TNM96VAF-O / TNM96P / TNM96E



TNM 3440



Class: 0,2

Onsite programmable: CT ratios and PT ratios
 Secondary CT 1A / 5A
 System configuration 3PH4W / 3PH3W and single phase
 Low current suppression < 30mA

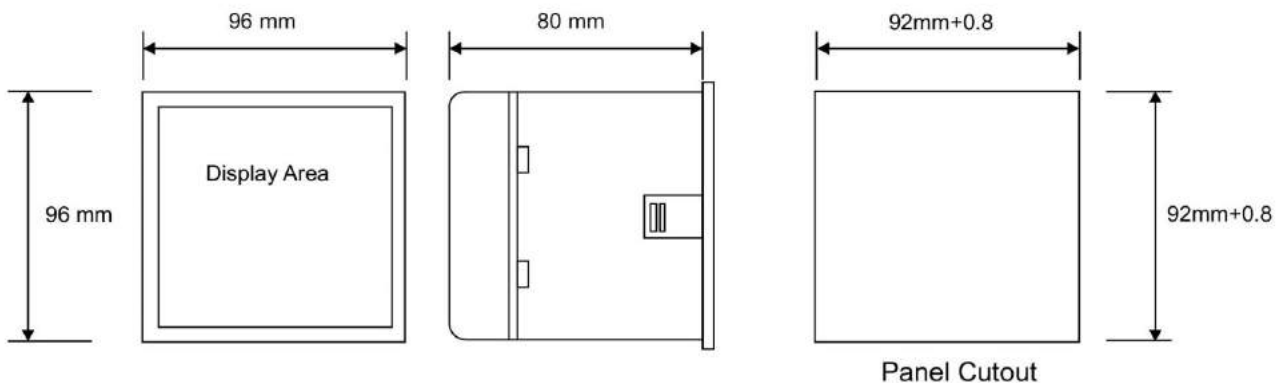
- Onsite selection of auto scroll / fixed screen
- Phase reversal indication
- Energy measurement (import and export)
- True RMS measurement
- LED Display: 3 lines 4 digits
- Storage of parameters possible
- Number of parameter measured more than 46
- Parameter screen recall
- Total harmonic distortion THD
- Energy count storage
- Programmable energy format and enery rollover count
- Run hour, ON hour and number of interruptions
- User assignable registers for MODBUS
- Configuration of the instrument via MODBUS

Optional Modbus output (RS485)
 1 pulse output
 2 analog outputs
 Ethernet

Type	Class	Auxiliary supply
TNM 3440	0.2	100 - 550V AC / DC
		12 - 60V AC/DC

Optional output (on request)
RS485 + 2 pulse outputs
RS485 + 1 pulse output + 2 analog output
Ethernet

Dimensions TNM3440



TNM 3440+



Class: 0,2S

Onsite programmable: CT ratios and PT ratios
 PT secondary
 System configuration 3PH4W or 3PH3W
 Low current suppression < 30mA

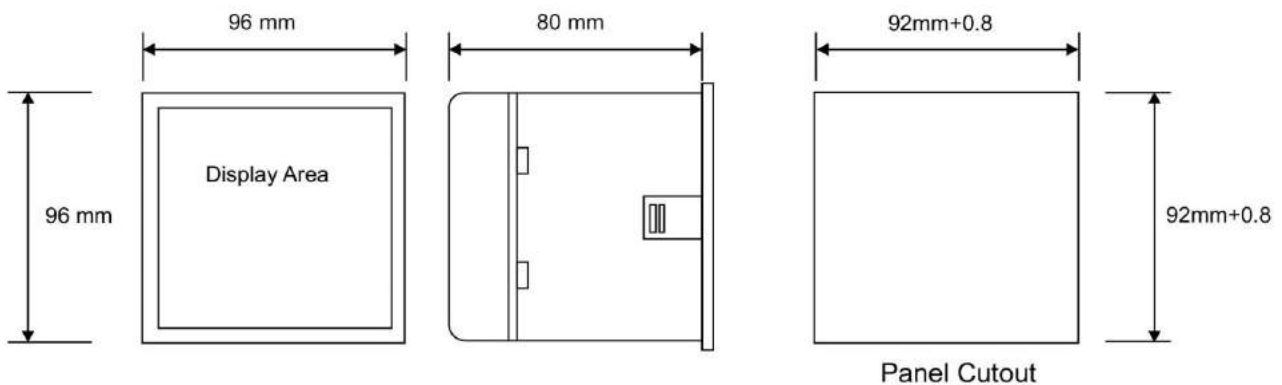
- Onsite selection of auto scroll / fixed screen
- Phase reversal indication
- Energy measurement (import and export)
- Auto energy ranging count on display
- LED Display: 3 lines 4 digits
- Storage of parameters possible (min. Max)
- Parameter screen recall
- Total harmonic distortion THD
- Energy count storage
- Programmable energy format and enery rollover count
- Run hour, ON hour and number of interruptions
- User assignable registers for MODBUS
- Configuration of the instrument via MODBUS

Optional Modbus output (RS485)
 2 relay output (Pulse output / Limit switch)
 2 analog outputs
 Ethernet

Type	Class	Auxiliary supply
TNM 3440+	0.2S	100 - 550V AC / DC
		12 - 60V AC/DC

Optional output (on request)	
RS485 + 2 pulse outputs	
RS485 + 1 pulse output + 2 analog output (unidirectional)	
RS485 + 1 pulse output + 2 analog output (bidirectional)	
Ethernet	

Dimensions TNM3440+



UNIVERSAL MEASURING INSTRUMENTS

TNM96-ETN



TNM96-ETN energy powermeter is a compact, highly accurate 0.2% (0.1% optional), three-phase powermeter, especially designed to meet the needs of power and energy measurement in any electrical installation for monitoring the parameters of electrical network.

TNM96-ETN includes history data logging and supports standard communication protocols BACnet and Modbus with simple integration into building management systems over RS485 or ethernet TCP/IP communication.

An indispensable tool for the building engineer, it aids efficient use of electricity by showing power factor, max and min demand, current in neutral line, harmonics up to 64th, periodic energy and very important safety tool - a leakage current.

TNM96ETN-I: RS485

TNM96-ETN-II: TCP/IP y RS485

TNM160



TNM160 energy powermeter is a compact, multi functional, multi channel, three single-phase powermeter, especially designed to meet the stringent needs of power and energy measurement in any electrical installation up to 1 or 2 sets of three phase energy meters, or up to 6 single phase.

TNM160 includes history data logging up to 6 months and supports standard communication protocols BACnet and Modbus with simple integration into building management systems over RS485 or Ethernet TCP.

An indispensable tool for the building engineer, it aids efficient use of electricity by showing power factor, max. and min demand an current in neutral line.

TNM230



TNM230 energy powermeter is a compact, multi functional, multi channel, three single-phase powermeter, especially designed to meet the stringent needs of power and energy measurement in any electrical installation up to 8 sets three phase channels or up to 24 single phase energy meters.

TNM230 includes history data logging up to 6 months and supports standard communication protocols BACnet and Modbus with simple integration into building management systems over RS485 or Ethernet TCP.

An indispensable tool for the building engineer, it aids efficient use of electricity by showing power factor, max. and min demand an current in neutral line.

TNM300



TNM300 energy powermeter is a compact, multi functional, multi channel, three single-phase powermeter, especially designed to meet the stringent needs of power and energy measurement in any electrical installation:

- Up to 12 sets of three phase energy meters or
- Up to 36 singles phases energy meters or
- Up to 36 digital Inputs

TNM300 includes history data logging up to 4 months and supports standard communication protocols BACnet and Modbus with simple integration into building management systems over RS485 or Ethernet TCP.

An indispensable tool for the building engineer, it aids efficient use of electricity by showing power factor, max. and min demand an current in neutral line.

		TNM96-ETN	TNM160	TNM230	TNM300
3 phases / 1 phase		●	1 or 2 sets / until 6 sets	8x / 24x	12x / 36x
Accuracy class		0,2%	0,2%	0,2%	0,2%
* Optional accuracy class		0,1%	-	-	-
1600 sample per cycle		●	●	●	●
Digital input		2	-	-	-
Digital output		1	-	-	-
Harmonic resolution		64	32	32	32
Graphical display of the harmonics measurements		●	-	-	-
Harmonic distortion		I-THD, U-THD	-	-	-
Waveform		Only display	●	●	●
Leakage (residual) current		●	-	-	-
Simple operated menus		●	●	●	●
Multilingual support		●	●	●	●
Data logging		●	●	●	●
Alarms		●	●	●	●
Alarms log		●	●	●	●
Minimum / Maximum		●	●	●	●
RS485 communication port Modbus		●	●	●	●
Ethernet (TCP / IP) Modbus and BACnet		Only TNM96-ETN-II	●	●	●
BACnet TCP / IP protocol		Only TNM96-ETN-II	●	●	●
BACnet MS / TP protocol		●	●	●	●
Web browser capability		Only TNM96-ETN-II	●	●	●
LCD graphical display type		High resolution color LCD display	High resolution color LCD display	High resolution color LCD display	High resolution color LCD display
Display resolution		320 x 240 pixels	320 x 240 pixels	320 x 240 pixels	320 x 240 pixels
Frontal panel mounting		●	-	-	-
DIN rail mounting		-	●	●	●
Fast trends		●	-	-	-
Power requirements		90-250V AC / 110-280V DC	90-250V AC / 110-280V DC	90-250V AC / 110-280V DC	90-250V AC / 110-280V DC
Frequency		50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Consumption		8VA	6VA	8VA	8VA
Environmental / Operation		-20...70°C	-20...70°C	-20...70°C	-20...70°C
Environmental / Storage		-20...80°C	-20...80°C	-20...70°C	-20...70°C
Humidity: 0-95 RH%, non condensing		●	●	●	●
Voltage	Phase-phase Phase-neutro	0-950 VAC RMS 0-550 VAC RMS	0-950 VAC RMS 0-550 VAC RMS	0-950 VAC RMS 0-550 VAC RMS	0-950 VAC RMS 0-550 VAC RMS
Current	Nominal	0-1 A or 0-5 A	0-1 A or 0-5 A	0-1 A or 0-5 A	0-1 A or 0-5 A
Measurement type		True RMS	True RMS	●	●
Maximum input current		5/6A	6A	6A	6A
Dimensions		96 x 96 x 80	97 x 160 x 65	110 x 300 x 60	110 x 300 x 60
Weight		0,650 Kg.	0,550 Kg.	1,25 Kg.	1,25 Kg.
Price		TNM96-ETN-			
		TNM96-ETN-			

DIGITAL INSTRUMENTS DIRECT CURRENT / DC



Accuracy class: 0.5
 Auxiliary supply: 40 ...300V AC/DC
 20 ...40V AC / 20 ...60VDC
 Frequency: 45 - 65 Hz

Type	Input		Dimensions
Eine + Voltage	mV	-75...0...75mV, -150...0...150mV	96x96
	V	-5...0...5V, -10...0...10V, 0...500V, 0...1000V	96x48
Eine + Current	mA	-10...0...10mA, -20...0...20mA, 4...20mA	96x96
			96x48
	A	-1...0...1A, -5...0...5A	96x96
			96x48

DIGITAL INSTRUMENTS ALTERNATING CURRENT / AC

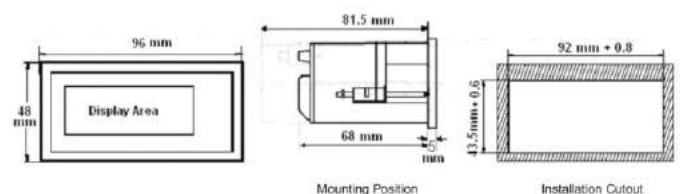
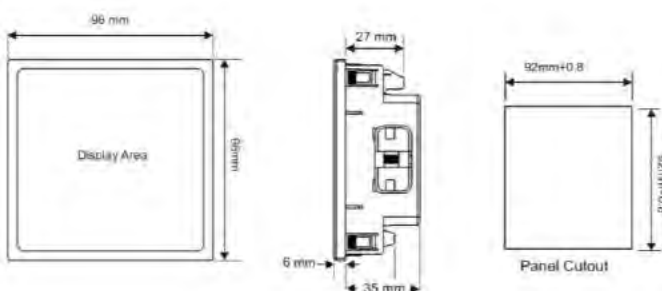


Accuracy class: 1
 Accuracy class: 0.5 (optional) / price on request
 Auxiliary supply: 40 ...300V AC/DC
 20 ...40V AC / 20 ...60VDC
 Frequency: 45 - 65 Hz

Type	Input		Dimensions
Eine DPM V Voltage	1 phase	57.5 ...300V L-N (programmable) 600V L-N (Fixed input)	96x96
	3 phases	100 ...500V L-L (programmable)	96x48
Eine DPM A Current	1 phase	1A / 5A programmable	96x96
			96x48
	3 phases	1A / 5A programmable	96x96
			96x48

Dimensions 96x96

Dimensions 96x48



HOUR COUNTERS

Type BZ48



Type BZ72

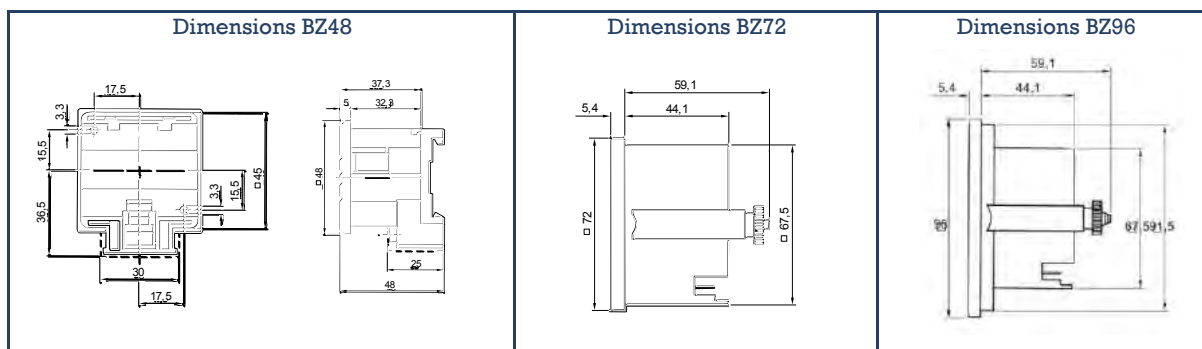
Type BZ96



Type		BZ48	BZ72	BZ96
Dimensions in mm		48 x 48	72 x 72	96 x 96
Reset		No	No	No
AC ¹⁾	115 ó 230V AC			
	12,24,36-48 y 400V AC *	On request	-	-
	12,24,42 y 400V AC *	-	On request	On request
DC	10-80 V DC		-	-
	10-50V DC	-		
	2-20V DC / 80-220V DC *	On request	-	-
	36,80,110V DC *	-	On request	On request

1) Frequency 50 or 60Hz

* Special executions: on request



ANALOGUE MEASURING INSTRUMENTS

MOVING IRON INSTRUMENTS EQ..n

Alternating current AC

Exchanging scales

EQ..n



Scale 90°
Class 1,5

TYPE		EQ48n	EQ72n	EQ96n	EQ144n
Dimensions in mm					
V	6-10-15-25-40-60-100-150-250				
	300-400-500-600				
	.../100, .../110				
mA	100-150-250-400-600				
A	1-1,5-2,5-4-6-10-15				
	25-40-60				
	100				
	.../5A, .../1A				
Scale					

MOVING IRON INSTRUMENTS WITH RECTIFIER PR..n

Alternating current AC

PR..n



Scale 90°
Class 1,5

TYPE		PR48n	PR72n	PR96n	PR144n
Dimensions in mm					
V	6-10-15-25-40-60-100				
	150-250-300-400-500-600				
	.../100, .../110				
mA	1-1,5-2,5-4-5-6-10-15-20-25-40				
	60-100-150-250-400-600-750				
A	1-1,5-2,5-4-6-10				
	.../5A, .../1A				
Scale					

* PR48n only for external current transformers

MOVING IRON INSTRUMENTS WITH RECTIFIER PAR..n

Alternating current AC

PAR..n



Scale 240°
Class 1,5

TYPE		PAR72n	PAR96n	PAR144n
Dimensions in mm				
		72 x 72	96 x 96	144 x 144
V	6-10-15-25-40-60-100			
	150-250-300-400-500-600			
	.../100, .../110			
mA	1-1,5-2,5-4-5-6-10-15-20-25-40			
	60-75-100-150-250-400-600			
A	1-1,5-2,5-4-6-10 *			
	.../5A, .../1A			
Scale				

* PAR48n only for external current transformers

VOLTMETER AND AMMETER WITH SWITCH EQ..n SWT

Alternating current AC

EQ72n SWT y EQ96n SWT



Scale 90°
Class 1,5

TYPE		EQ72n SWT3	EQ96n SWT3
Dimensions in mm			
		72 x 72	96 x 96
V	3 posiciones L1-L2; L2-L3; L3-L1		
	100-150-250-300-400-500-600		
	.../100, .../110		
A	3 Posiciones L1; L2; L3		
	.../5A .../1A		
Scale			



Scale 90°
Class 1,5

TYPE		EQ72n SWT6	EQ96n SWT6
Dimensions in mm		72 x 72	96 x 96
V	6 Posiciones L1-N; L2-N; L3-N; L1-L2; L2-L3; L3-L1	SWT6	SWT6
	100-150-250-300-400-500-600		
	.../100, .../110		
Scale			

MAXIMUM DEMAND INDICATORS BIQ..n / BOQ..n

Alternating current AC

BIQ..n



BIQ: Bimetallic system

Final scale value (A) = 120%
Primary rated current + 20% overload
Class 3
Setting time at transformer: 15 min



BOQ..n

BOQ: Bimetallic system and moving iron system

Bimetallic system Class 3
Final scale value (A) = 120%
Primary rated current + 20% overload
Moving iron system Class 1,5
Final scale value (A) = 200%
Primary rated current + 100% overload
Setting time at transformer: 15 min



TYPE		BIQ72n	BIQ96n	BOQ72n	BOQ96n
Dimensions in mm		72 x 72	96 x 96	72 x 72	96 x 96
V	../1A				
	../5A				
Scale					

WATTMETER DQ..n / DAQ..n

Alternating current AC

Active Power

DQ..n



1A - 5A



Scale 90°
Class 1,5

TYPE		96 x 96	144 x 144
Dimensions in mm		96 x 96	144 x 144
SINGLE PHASE		DQ96n/1w	DQ144n/1w
V	100-110-127-220-289-380		
	.../100√3 .../110√3		
3 PHASE 3 WIRE BALANCED LOAD		DQ96n/1d	DQ144n/1d
V	100-110-120-220-240-380		
	415-440-500		
3 PHASE 4 WIRE BALANCED LOAD		DQ96n/1	DQ144n/1
V	100-110-120-220-240-380		
	415-440-500		
3 PHASE 3 WIRE UNBALANCED LOAD		DQ96n/2	DQ144n/2
V	100-110-120-220-240-380		
	415-440-500		
3 PHASE 4 WIRE UNBALANCED LOAD		DQ96n/3	DQ144n/3
V	100-110-120-220-240-380		
	415-440-500		

DAQ..n



5A



5A



Scale 240°
Class 1,5

TYPE		96 x 96	144 x 144
Dimensions in mm		96 x 96	144 x 144
SINGLE PHASE		DAQ96n/1w	DAQ144n/1w
V	100-110-127-220-289-380		
	.../100√3 .../110√3		
3 PHASE 3 WIRE BALANCED LOAD		DAQ96n/1d	DAQ144n/1d
V	100-110-120-220-240-380		
	415-440-500		
3 PHASE 4 WIRE BALANCED LOAD		DAQ96n/1	DAQ144n/1
V	100-110-120-220-240-380		
	415-440-500		
3 PHASE 3 WIRE UNBALANCED LOAD		DAQ96n/2	DAQ144n/2
V	100-110-120-220-240-380		
	415-440-500		
3 PHASE 4 WIRE UNBALANCED LOAD		DAQ96n/3	DAQ144n/3
V	100-110-120-220-240-380		
	415-440-500		

VARMETERS DQ..n/b - DAQ..n/b

Alternating current AC

Reactive Power

DQ..n/b



1A - 5A



Scale 90°
Class 1,5

TYPE			
Dimensions in mm		96 x 96	144 x 144
SINGLE PHASE			
V	100-110-127-220-289-380	DQ96n/1wb	DQ144n/1wb
	.../100√3 .../110√3		
3 PHASE 3 WIRE BALANCED LOAD			
V	100-110-120-220-240-380	DQ96n/ldb	DQ144n/ldb
	415-440-500		
3 PHASE 4 WIRE BALANCED LOAD			
V	100-110-120-220-240-380	DQ96n/1b	DQ144n/1b
	415-440-500		
3 PHASE 3 WIRE UNBALANCED LOAD			
V	100-110-120-220-240-380	DQ96n/2b	DQ144n/2b
	415-440-500		
3 PHASE 4 WIRE UNBALANCED LOAD			
V	100-110-120-220-240-380	DQ96n/3b	DQ144n/3b
	415-440-500		

DAQ..n/b



1A - 5A



Scale 240°
Class 1,5

TYPE			
Dimensions in mm		96 x 96	144 x 144
SINGLE PHASE			
V	100-110-127-220-289-380	DAQ96n/1wb	DAQ144n/1wb
	.../100√3 .../110√3		
3 PHASE 3 WIRE BALANCED LOAD			
V	100-110-120-220-240-380	DAQ96n/ldb	DAQ144n/ldb
	415-440-500		
3 PHASE 4 WIRE BALANCED LOAD			
V	100-110-120-220-240-380	DAQ96n/1b	DAQ144n/1b
	415-440-500		
3 PHASE 3 WIRE UNBALANCED LOAD			
V	100-110-120-220-240-380	DAQ96n/2b	DAQ144n/2b
	415-440-500		
3 PHASE 4 WIRE UNBALANCED LOAD			
V	100-110-120-220-240-380	DAQ96n/3b	DAQ144n/3b
	415-440-500		

ELECTRONIC POWER FACTOR DPQ..n / EPA..n

Alternating current AC

DPQ..n



Scale 90°
Class 1,5



Alternating current 50-60 Hz

- Cap 0.5 - 1 - 0.5 Ind
- Cap 0.8 - 1 - 0.3 Ind
- Cap 0.8 - 1 - 0.8 Ind

EPA..n

Scale 240°
Class 1,5

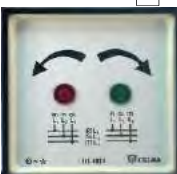


TYPE					
Dimensions in mm		96 x 96	144 x 144	96 x 96	144 x 144
SINGLE PHASE					
V	up to 500	DPQ96n/1	DPQ144n/1	EPA96n/1	EPA144n/1
3 PHASE 3 WIRE BALANCED LOAD					
V	400-440-500	DPQ96n/2	DPQ144n/2	EPA96n/2	EPA144n/2

PHASE SEQUENCE INDICATOR ISE..n

Alternating current AC

ISE..n



ISE/1: 3 phases current

ISE/2: 3 phases current with switch contact

TYPE				
Dimensions in mm		ISE72n/1	ISE96n/1	ISE96s/2
V	150-600	72 x 72	96 x 96	96 x 96
	100-110-230-380-400-440-500			

POINTER FREQUENCY METER FA..n / FAG..n

Alternating current AC

FA..n



Scale 90°
Class 0,5

	TYPE	FA48n	FA72n	FA96n	FA144n
	Dimensions in mm	48 x 48	72 x 72	96 x 96	144 x 144
45 - 55 Hz	100 V-110V-230V-400V-440V				
45 - 65 Hz	100 V-110V-230V-400V-440V				
55 - 65 Hz	100 V-110V-230V-400V-440V				

FAG..n



Scale 240°
Class 0,5

	TYPE	FAG48n	FAG72n	FAG96n
	Dimensions in mm	48 x 48	72 x 72	96 x 96
45 - 55 Hz	100 V-110V-230V-400V-440V			
45 - 65 Hz	100 V-110V-230V-400V-440V			
55 - 65 Hz	100 V-110V-230V-400V-440V			

SYNCHROSCOPE DIGITAL LED - ANALOGUE SQ..n

Alternating current AC

SQ..n



Digital
SQ/1: Single phase
SQ/2: 3 phases 3 wire

	TYPE	SQ96n/1	SQ96n/2
	Dimensions in mm	96 x 96	96 x 96
V	380 - 440V		

SQ..s



Analógico
SQ/1: Single phase
SQ/2: 3 phases 3 wire

	TYPE	SQ96s/1 *	SQ144s/1 *
	Dimensions in mm	96 x 96	144 x 144
V	100, 110, 230, 400, 440	on request	on request
	TYPE	SQ96s/2 **	SQ144s/2 **
	Dimensions in mm	96 x 96	144 x 144
V	100, 110, 230, 400, 440	on request	on request

* with separated series resistor (external) - additional / ** with separated series resistor (external) - additional: 400, 440V

DOUBLE VOLTMETER EPQ..s / EQD..n

Alternating current AC

EPD..n



EQD..n



Class 1,5

	TYPE	EPD96n	EQD96n
	Dimensions in mm	96 x 96	96 x 96
V	2x 100V - 2x 110V - 2x 150V - 2x 230V - 2x 250V - 2 x 300V 2x 400V - 2 x 500V	on request	

DOUBLE FREQUENCY METER FAD..n / ZERO VOLTAGE METER PRN..n

Alternating current AC

FAD..n



TYPE	FAD96n
Dimensions in mm	96 x 96
45 - 55 Hz	
45 - 65 Hz	
55 - 65 Hz	

PRN..n



TYPE	PRN96n	PRN144s
Dimensions in mm	96 x 96	144 x 144
100 V	on request	-
110 V	on request	on request
230 V	on request	-
400 V	on request	on request

SYNCHRONISING WALL BRACKET SW..

Alternating current AC

Equipment with three instruments: *

- Double voltmeter
- Double frequency meter
- Synchronoscope (1 phase or 3 phases)

Connection on parallel two generators or net and one generator.

Dimensions of the instruments: 96x96mm or 144x144mm

Position: Vertical (as column with 180° rotation) / Horizontal (with two supports)

* on request



MOVING COIL INSTRUMENTS PQ..n

Direct current DC

PQ..n



Scale 90°
Class 1,5

TYPE		PQ48n	PQ72n	PQ96n	PQ144n
Dimensions in mm		48 x 48	72 x 72	96 x 96	144 x 144
mV	15-25-40-60				
	100-150-250-400-600				
V	1-1,5-2,5-4-6-10-15-25-40-60				
	100-150-250-300-400-500-600				
μA	100-150-250-400-600				
mA	1-1,5-2,5-4-6-10-15-25-40-60				
	100-150-250-300-400-500-600				
	4-20mA 0-20mA				
A	1-1,5-2,5-4-6-10-15-25-40-60				
	100				
	.../50mV, ...60mV .../100mV, ...150mV				
SCALE					

MOVING COIL INSTRUMENTS PAQ..n

Direct current DC

PAQ..n



Scale 240°
Class 1,5

TYPE		PAQ48n	PAQ72n	PAQ96n	PAQ144n
Dimensions in mm		48 x 48	72 x 72	96 x 96	144 x 144
mV	15-25-40-60				
	100-150-250-400-600				
V	1-1,5-2,5-4-6-10-15-25-40-60				
	100-150-250-300 400-500-600				
μA	100-150-250-400-600				
mA	1-1,5-2,5-4-6-10-15-25-40-60				
	100-150-250-300-400-500-600 4-20mA / 0-20 mA				
A	1-1,5-2,5-4-6-10-15-25-40-60				
	100				
	.../50mV, ...60mV .../100mV, ...150mV				
SCALE					

INSTRUMENTS WITH CONTACTS EQC / PQC

EQC



Moving iron instrument with electronic limit control AC
EQC96n (1) 1 max. + 1 min.
EQC96n (2) 2 max. Or 2 min.
Auxiliary supply 230V 50 Hz

TYPE		EQC96
Dimensions in mm		96x96
V	6-10-15-25-40-60-100-150-250-300-400-500-600 .../100V, .../110V	on request on request
A	.../1A, .../5A	on request

Other values on request

PQC



Moving coil instrument with electronic limit control DC
PQC96n (1) 1 max. + 1 min.
PQC96n (2) 2 max. Or 2 min.
Auxiliary supply 230V 50 Hz

TYPE		PQC96
Dimensions in mm		96x96
V	6-10-15-25-40-60-100-150-250-300-400-500-600 .../100V, .../110V	on request on request
A	.../60mV, .../150mV	on request

Other values on request

INSTRUMENTS WITH CONTACTS

They incorporate in the same device the functions of electronic relay and measuring instrument. Its applications are very wide, covering all those cases in which it is required to control a magnitude, alternating or continuous, keeping it within a range of certain values.

VERSIONS

DIFFERENTIAL - They incorporate one channel to control the minimum value and another for the maximum value.

CASCADE - It incorporates two channels to control two maximum values. Each channel is completely independent and controls a switched output relay, with potential-free contacts. The regulation level is adjusted by a potentiometer located on the back of the device between 0 and 100% of the device's measurement range. With another potentiometer, a time delay of 0 to 30 seconds can be set from the moment in which the controlled quantity reaches the regulation level and the moment in which the output relay is triggered, which is indicated by a red led on the scale instrument.



CURRENT TRANSFORMERS

LINE AST

* Price for sec. 5A and Class 1

sec. 1A: additional cost 20%

Class 0.5: additional cost 10%

ASTR14



51 x 70 x 32 mm
Cable conductor: Ø 14 mm

Primary A	Class 0,5	Class 1
	sec. 5A / VA	
40	-	1
50	-	1,5
60	-	1,5
75	-	1,5
80	-	1,5
100	2,5	3,75
120	2,5	3,75
125	2,5	3,75
150	3,75	5
200	3,75	5
250	5	7,5
300	7,5	7,5

ASTR21



44 x 66 x 30 mm
Cable conductor: Ø 21 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
50	-	1,25	-	1,25
60	-	1,25	-	1,25
75	-	1,25	-	2,5
80	-	1,25	-	2,5
100	1,5	2,5	1,5	5
125	2,5	3,75	2,5	5
150	3,75	5	3,75	-
200	5	5	5	-
250	5	7,5	5	-
300	5	10	5	-
400	3,75	7,5	-	-
500	3,75	7,5	-	-

ASTMR21



60 x 80 x 30 mm
Cable conductor: Ø 21 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
50	-	1	-	-
60	-	1,25	-	-
75	-	2,5	-	-
80	-	3,75	-	-
100	2,5	5	2,5	5
125	2,5	5	2,5	5
150	3,75	7,5	3,75	7,5
200	5	10	5	10
250	5	10	5	10
300	7,5	10	7,5	-
400	7,5	7,5	7,5	-
500	5	10	-	-

AST210S



50 x 70 x 34 mm
Cable conductor: Ø 16 mm
Primary bar: 20 x 10 mm

Primary A	Class 0,5	Class 1
	sec. 5A / VA	
50	-	1,5
60	-	1,25
75	1,5	1,5
80	3,75	3,75
100	3,75	5
125	3,75	5
150	3,75	7,5
200	5	7,5
250	5	10
300	5	10

* Price for sec. 5A y Class 1 sec. 1A: additional cost of 20% Class 0.5: additional cost of 10%

AST220



62 x 78 x 40 mm
Cable conductor: Ø 12 mm
Primary bar: 20 x 10 mm

Primary A	Class 0,5	Class 1
	sec. 5A / VA	
50	-	1,5
60	-	2,5
75	1,5	3,75
80	2,5	3,75
100	2,5	5
125	3,75	5
150	5	7,5
200	7,5	10
250	10	15
300	10	15
400	15	15
500	15	15

AST255S



50 x 70 x 34 mm
Cable conductor: Ø 21 mm
Primary bar: 25 x 5 mm

Primary A	Class 0,5	Class 1
	sec. 5A / VA	
50	-	1,25**
60	-	1,25
75	1,5	1,5
80	3,75	3,75
100	3,75	5
125	3,75	5
150	3,75	7,5
200	5	7,5
250	5	10
300	5	10

** Class 3

AST310S



50 x 70 x 34 mm
Cable conductor: Ø 26 mm
Primary bar: 30 x 10 mm

Primary A	Class 0,5	Class 1	Class 1
	sec. 5A / VA		sec. 1A / VA
100	-	2,5	2,5
125	-	2,5	2,5
150	-	2,5	2,5
200	2,5	5	5
250	3,75	5	5
300	3,75	5	5
400	5	5	5

AST3R30



60 x 80 x 30 mm
Cable conductor: Ø 30 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
100	-	2,5	-	2,5
125	-	2,5	-	2,5
150	2,5	5	2,5	5
200	5	7,5	5	5
250	5	10	5	10
300	7,5	10	7,5	10
400	10	10	10	10
500	10	10	10	10
600	7,5	10	-	-
700	-	10	-	-
800	-	10	-	-

* Price for sec. 5A y Class 1 sec. 1A: additional cost of 20% Class 0.5: additional cost of 10%

AST310

60 x 80 x 30 mm

Primary bar: 30 x 10 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
50	**	-	**	-
100	-	2,5	-	2,5
125	2,5	2,5	2,5	2,5
150	5	5	5	5
200	5	7,5	5	5
250	10	10	10	7,5
300	10	10	10	10
400	10	10	-	10
500	15	15	-	10
600	15	15	-	-
700	10	10	-	-
750	10	10	-	-
800	15	10	-	-

** Class 3 / 1,25VA

AST315

60 x 80 x 30 mm

Primary bar: 30 x 15 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
50	-	1,25**	-	-
60	-	1,25	-	-
75	-	1,25	-	2,5
80	-	1,25	-	2,5
100	-	1,25	1,25	2,5
125	-	3,75	1,25	3,75
150	1,25	3,75	2,5	5
200	3,75	3,75	3,75	5
250	5	7,5	5	7,5
300	7,5	7,5	7,5	10
400	7,5	10	10	10
500	7,5	10	10	10
600	10	10	10	15
700	10	10	10	15
750	15	20	15	15

** Class 3

AST4R30

68 x 87 x 40 mm

Cable conductor: Ø 30 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
60	-	1,25	-	-
75	-	2,5	-	1
80	-	2,5	-	2,5
100	2,5	5	-	5
125	3,75	5	-	5
150	3,75	10	-	10
200	5	15	5	10
250	5	15	5	15
300	10	15	10	15
400	10	15	10	15
500	15	15	15	-
600	15	15	15	-

* Price for sec. 5A y Class 1 sec. 1A: additional cost of 20% Class 0.5: additional cost of 10%

AST4B312



68 x 87 x 34 mm
Cable conductor: Ø 26 mm
Primary bar: 30 x 10 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
60	-	1,25	-	-
75	-	1,5	-	-
80	-	1,5	-	-
100	-	5	-	5
125	-	5	-	5
150	5	10	5	5
200	5	10	5	10
250	5	15	5	10
300	10	15	10	15
400	10	15	10	15
500	15	15	15	-
600	15	15	15	-

AST5R30



75 x 100 x 45 mm
Cable conductor: Ø 30 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
50	-	1	-	-
60	-	1,25	-	-
75	-	2,5	-	-
80	-	2,5	-	-
100	-	7,5	-	5
125	3,75	10	3,75	5
150	5	15	5	7,5
200	10	15	10	10
250	10	15	10	15
300	10	15	10	15
400	10	15	10	15
500	10	15	10	-
600	10	15	10	-

AST5B312



75 x 100 x 45 mm
Cable conductor: Ø 26 mm
Primary bar: 30 x 10 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
50	-	1,25	-	-
60	-	1,5	-	-
75	-	2,5	-	-
80	-	5	-	-
100	3,75	7,5	3,75	3,75
125	5	10	5	5
150	7,5	15	7,5	10
200	10	15	10	10
250	5	15	5	15
300	10	15	10	15
400	10	15	10	15
500	10	15	10	15
600	10	15	10	15

AST4R40



70 x 90 x 30 mm
Cable conductor: Ø 40 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
150	-	1,5	-	1,5
200	1,5	5	1,5	5
250	2,5	7,5	2,5	7,5
300	5	7,5	5	10
400	10	10	10	10
500	10	10	10	10
600	-	10	-	10
750	-	10	-	-
800	-	10	-	-
1000	-	10	-	-

* Price for sec. 5A y Class 1 sec. 1A: additional cost of 20% Class 0.5: additional cost of 10%

AST412



70 x 90 x 30 mm
Cable conductor: Ø 33 mm
Primary bar: 40 x 13 mm
or 2 x 30 x 10 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
125	2,5	3,75	2,5	1,5
150	3,75	5	3,75	5
200	5	7,5	5	7,5
250	5	7,5	5	7,5
300	7,5	10	7,5	7,5
400	7,5	10	7,5	10
500	10	15	10	10
600	10	15	10	-
750	10	15	10	-
800	-	15	-	-
1000	-	20	-	-

AST5B412



75 x 100 x 45 mm
Cable conductor: Ø 33 mm
Primary bar: 40 x 13 mm
or 2 x 30 x 10 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
75	-	1,5	-	-
80	-	1,5	-	-
100	2,5	3,75	-	-
125	2,5	5	2,5	5
150	5	10	5	7,5
200	5	15	5	10
250	10	15	10	10
300	10	15	10	15
400	10	15	10	15
500	10	15	10	15
600	10	15	10	15

AST5R50



84 x 108 x 30 mm
Cable conductor: Ø 50 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
100	-	1	-	-
125	-	1,25	-	-
150	-	2,5	-	-
200	-	5	-	5
250	2,5	7,5	2,5	5
300	5	15	5	10
400	10	15	10	10
500	10	15	10	15
600	10	15	10	15
750	15	15	15	15
800	15	15	15	15
1000	15	15	15	15
1250	15	15	15	15
1500	-	15	-	-

AST512



84 x 108 x 30 mm
Cable conductor: Ø 42 mm
Primary bar: 50 x 13 mm
or 2 x 40 x 10 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
100	-	1,25	-	1,25
125	-	1,25	-	2,5
150	-	1,25	-	2,5
200	-	5	-	5
250	2,5	7,5	2,5	5
300	5	10	5	10
400	7,5	15	7,5	15
500	15	15	15	15
600	5	20	5	15
750	15	10	15	15
800	15	15	15	15
1000	15	20	15	15
1250	15	20	15	-
1500	-	15	-	-

sec. 1A: additional cost of 20%

Class 0.5: additional cost of 10% sec. 5A y Class 1

AST6R65



96 x 121 x 30 mm
Cable conductor: Ø 65 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
200	-	2,5	-	2,5
250	-	5	-	5
300	5	5	5	5
400	5	10	5	10
500	10	15	10	15
600	15	15	15	15
750	15	15	15	15
800	15	15	15	15
1000	15	15	15	15
1250	15	15	15	15
1500	15	15	15	15
1600	15	15	15	15
2000	-	15	-	-

AST615



96 x 121 x 30 mm
Cable conductor: Ø 53 mm
Primary bar: 60 x 15 mm
or 2 x 50 x 10 mm
or 40 x 40 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
200	-	2,5	-	2,5
250	2,5	5	2,5	5
300	2,5	5	2,5	5
400	5	15	5	7,5
500	7,5	15	7,5	10
600	10	15	10	15
750	15	15	15	15
800	15	15	15	15
1000	15	20	15	15
1250	15	15	15	15
1500	15	15	15	-
1600	15	20	15	-
2000	30	15	30	-

AST615.5



95 x 121 x 30 mm
Cable conductor: Ø 52 mm
Primary bar: 60 x 15 mm
or 2 x 50 x 10 mm
or 40 x 40 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
200	1,25	3,75	-	-
250	2,5	5	-	-
300	3,75	5	3,75	5
400	5	7,5	5	7,5
500	10	10	10	10
600	10	10	10	10
750	15	15	15	15
800	15	15	15	15
1000	20	20	15	20
1250	20	20	15	20
1500	20	25	-	-
1600	25	30	-	-

AST640



96 x 121 x 30 mm
Cable conductor: Ø 61 mm
Primary bar: 60 x 40 mm
or 3 x 60 x 10 mm
or 3 x 50 x 10 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
200	-	2,5	-	-
250	-	5	-	2,5
300	5	5	-	5
400	3,75	7,5	3,75	5
500	5	10	5	10
600	10	15	10	15
750	10	15	10	15
800	15	15	15	15
1000	15	15	15	15
1250	15	15	15	-
1500	15	15	15	-
1600	15	20	15	-
2000	-	15	-	-

sec. 1A: additional cost of 20%

Class 0.5: additional cost of 10% sec. 5A y Class 1

AST815



105 x 132 x 30 mm
 Cable conductor: Ø 61 mm
 Primary bar: 80 x 15 mm
 or 2 x 60 x 10 mm
 or 3 x 50 x 10 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
400	-	5	-	5
500	-	7,5	-	7,5
600	5	10	5	10
750	5	10	5	10
800	10	10	10	10
1000	20	15	20	10
1250	7,5	15	7,5	10
1500	10	10	10	10
1600	10	15	10	15
2000	10	10	10	15
2500	5	5	5	25

AST830 / AST830V



Cable conductor: Ø 70 mm

AST830: 105 x 132 x 30 mm
AST830V: 105 x 132 x 30 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
400	-	3,75	-	3,75
500	-	7,5	-	7,5
600	5	10	5	10
750	5	10	5	10
800	7,5	7,5	7,5	10
1000	15	15	15	-
1250	15	10	15	-
1500	10	10	10	-
1600	15	15	15	-

Primary bar: 2 x 80 x 10 mm or 60 x 60 mm
 Primary bar: 2 x 80 x 10 mm or 60 x 50 mm

AST1030 / AST1030V



131 x 144 x 30 mm
 Cable conductor: Ø 85 mm

AST1030: Primary bar: 2 x 100 x 10 mm or 80 x 64 mm
AST1030V: Primary bar: 2 x 100 x 10 mm or 75 x 60 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
600	-	10	-	7,5
750	5	10	5	10
800	7,5	10	7,5	10
1000	10	15	10	10
1250	15	15	15	10
1500	15	15	15	10
1600	15	15	15	15
2000	15	15	15	15
2500	15	30	20	15
3000	15	5	20	-
3200	15	15	15	-

AST1056



131 x 160 x 30 mm
 Cable conductor: Ø 61 mm
 Primary bar: 105 x 60 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
600	-	10	-	-
750	5	10	5	-
800	7,5	10	7,5	-
1000	10	10	10	10
1250	15	15	15	15
1500	15	15	15	15
1600	15	15	15	10
2000	15	25	15	10
2500	20	30	10	10
3000	25	30	15	15
3200	10	30	15	30
4000	30	30	15	15

sec. 1A: additional cost 20%
 Class 0.5: additional cost 10%

* Price for sec. 5A and Class 1

AST1256 / AST1256V



AST1256: 165 x 145 x 40 mm
AST1256V: 129 x 181 x 40 mm
 Primary bar: 125 x 60 mm

	Class 0,5	Class 1	Class 0,5	Class 1
Primary A	sec. 5A / VA		sec. 1A / VA	
600	-	10	-	10
750	5	15	5	15
800	7,5	15	7,5	15
1000	15	15	15	15
1250	15	20	15	15
1500	15	20	15	15
1600	15	20	15	15
2000	15	20	15	20
2500	15	20	15	20
3000	10	20	10	20
3200	15	20	15	20
4000	15	20	15	20
5000	15	20	15	20

AST1656 / AST1656V



AST1656: 205 x 145 x 40 mm
AST1656V: 129 x 221 x 40 mm
 Primary bar: 60 x 165 mm

	Class 0,5	Class 1	Class 0,5	Class 1
Primary A	sec. 5A / VA		sec. 1A / VA	
600	-	10	-	10
750	-	15	-	15
800	10	15	10	15
1000	15	15	15	20
1250	15	15	15	20
1500	15	15	15	20
1600	15	15	15	20
2000	15	20	15	20
2500	15	20	15	20
3000	15	20	15	20
3200	15	20	15	20
3500	15	20	15	20
4000	15	20	15	20
5000	-	20	-	20

AST1659 / AST1659V



AST1659: 223 x 171 x 35 mm
AST1659V: 155 x 236 x 35 mm
 Primary bar: 165 x 90 mm

	Class 0,5	Class 1	Class 0,5	Class 1
Primary A	sec. 5A / VA		sec. 1A / VA	
800	-	15	-	-
1000	15	15	15	-
1250	15	15	15	20
1500	15	15	15	20
1600	15	20	15	20
2000	15	20	15	20
2500	15	20	15	20
3000	15	20	15	20
3200	15	20	15	20
3500	15	20	15	20
4000	15	20	15	20
5000	15	20	15	20
6000	15	20	15	20

sec. 1A: additional cost of 20% Class 0.5: additional cost of 10% sec. 5A y Class 1

AST2065H / AST2065V



AST2065H:
151 x 265 x 35 mm
AST2065V:
135x 281 x 35 mm

Primary A	Class 0,5	Class 1	Class 0,5	Class 1
	sec. 5A / VA		sec. 1A / VA	
800	-	15	-	-
1000	15	15	15	20
1250	15	15	15	20
1500	15	15	15	20
1600	15	15	15	20
2000	15	15	15	20
2500	15	20	15	20
3000	15	20	15	20
3200	15	20	15	20
4000	15	20	15	20
5000	15	20	15	20
6000	15	20	15	20

Primary bar:205 x 65 mm

WOUND PRIMARY CURRENT

AST3WST / AST4WST



AST3WST: 60 x 80 x 30 mm
AST4WST: 60 x 87 x 40 mm

AST4WPL6 / AST5WPL6



AST4WPL6:68 x87 x40 mm
AST5WPL6: 75 x 100 x 45 mm

AST5WPL8 / AST5WPL10



AST5WPL8: 75 x 100 x 45 mm
AST5WPL10: 75 x 100 x 45 mm

Primary A	AST3WST	
	Sec. 5A	Sec. 1A
	Class 1	
5	5	5
6	5	5
7,5	5	5
10	5	5
12,5	5	5
15	5	5
20	5	5
25	5	5
30	5	5

Primary A	AST4WST	
	Sec. 5A	Sec. 1A
	Class 1	
5	10	10
6	10	10
7,5	10	10
10	10	10
12,5	10	10
15	10	10
20	10	10
25	10	10
30	10	10

Primary A	AST4WPL6	
	Sec. 5A	Sec. 1A
	Class 1	
5	5	5
6	5	5
7,5	5	5
10	5	5
12,5	5	5
15	5	5
20	5	5
25	5	5
30	5	5

Primary bras stud M6

Primary A	AST5WPL6	
	Sec. 5A	Sec. 1A
	Class 1	
5	15	15
6	15	15
7,5	15	15
10	15	15
12,5	15	15
15	15	15
20	15	15
25	15	15
30	15	15

Primary A	AST5WPL8	
	Sec. 5A	Sec. 1A
	Class 1	
50	15	15
60	15	15
75	15	15
80	15	15
100	-	-

Primary bras stud M8 / M10

Primary A	AST5WPL10	
	Sec. 5A	Sec. 1A
	Class 1	
50	-	-
60	-	-
75	-	-
80	15	15
100	15	15

CURRENT TRANSFORMERS

PROTECTION CURRENT TRANSFORMERS, AST-LINE

AST P635H



131 x 115 x 65 mm
Primary bar: 60 x 30 mm

Primary A	5P10		5P20		10P20	
	sec. 5A		sec. 5A		sec. 5A	
300	5		-		5	
400	10		5		5	
500	10		5		5	
600	15		5		5	
630	15		5		5	
700	15		5		5	
750	15		5		5	
800	15		5		10	
1000	15		5		10	
1200	15		10		10	
1250	15		10		10	
1500	15		10		10	
1600	15		10		10	
2000	15		-		10	

AST P1257H



166 x 170 x 55 mm
Primary bar: 120 x 70 mm

Primary A	5P10		10P10		5P20		10P20	
	sec. 5A		sec. 5A		sec. 5A	Price		
800	15		10		-	-	5	
1000	15		10		-	-	5	
1200	15		10		5	189,00 €	10	
1250	15		10		5	189,00 €	10	
1500	15		10		5	189,00 €	10	
1600	10		10		5	189,00 €	10	
2000	10		10		-	-	10	
2500	10		10		-	-	10	
3000	10		10		-	-	10	
3200	10		10		-	-	10	
3500	15		15		-	-		
4000	15		15		-	-		

AST1256H / AST1256V



AST1256H 145 x 165 x 40 mm
AST1256V 129 x 181 x 40 mm
Primary bar: 125 x 60 mm

Primary A	5P5	10P5	5P10	10P10	
	sec. 5A / VA		sec. 5A / VA		
1500	10	10	2,5	2,5	
2000	15	15	5	5	
2500	20	20	5	5	
3000	20	20	5	5	
3200	30	30	7,5	7,5	
3500	30	30	7,5	7,5	
4000	20	20	-	-	

1.2.2024 +5%

AST1656H / AST1656V



	5P5	10P5	5P10	10P10	
Primary A	sec. 5A / VA		sec. 5A / VA		
2000	15	15	2,5	2,5	
2500	20	20	3,75	3,75	
3000	20	20	5	5	
3200	20	20	5	5	
3500	20	20	5	5	
4000	20	20	5	5	
5000	30	30	7,5	7,5	

AST1656H: 145 x 205 x 40 mm

AST1656V: 129 x 221 x 40 mm

Primary bar: 60 x 165 mm

AST1659H / AST1659V



	5P5	10P5	5P10	10P10	
Primary A	sec. 5A / VA		sec. 5A / VA		
2000	15	15	3,75	3,75	
2500	20	20	5	5	
3000	20	20	5	5	
3200	20	20	5	5	
4000	30	30	7,5	7,5	
5000	30	30	7,5	7,5	
6000	45	45	7,5	7,5	

AST1659H: 171 x 223 x 35 mm

AST1659V: 155 x 281 x 35 mm

Primary bar: 165 x 90 mm

AST2065H / AST2065V



	5P5	10P5	5P10	10P10	
Primary A	sec. 5A / VA		sec. 5A / VA		
3000	20	20	5	5	
3200	20	20	5	5	
3500	20	20	5	5	
4000	30	30	7,5	7,5	
5000	30	30	7,5	7,5	
6000	45	45	10	10	

AST2065H:
151 x 265 x 35 mm

AST2065V:
135x 281 x 35 mm

Primary bar: 205 x 65 mm

CURRENT TRANSFORMERS

CLASSIC LINE

sec. 1A: additional cost of 20%

Dimension in mm

IBA



63 x 56 x 29
20 x 5
ø 16 mm

Primary A	Class 0,5	Class 1	Class 3
	sec. 5A or 1A / VA		
40	-	-	1,25
50	-	1,25	1,25
60	-	1,25	1,25
75	-	1,25	2,5
100	-	2,5	2,5
125	1,25	3,75	3,75
150	1,25	5	5
200	2,5	5	7,5

IBP



63 x 56 x 29
30 x 10
ø 22 mm

Primary A	Class 0,5	Class 1	Class 3
	sec. 5A or 1A / VA		
100	-	1,25	2,5
125	-	2,5	2,5
150	-	2,5	2,5
200	-	2,5	3,75
250	1,25	2,5	3,75
300	2,5	2,5	3,75
400	2,5	3,75	5
500	3,75	5	5
600	3,75	5	7,5

IB



105 x 76 x 38
30 x 10
ø 23 mm

Primary A	Class 0,5	Class 1	Class 3
	sec. 5A or 1A / VA		
50	-	1,25	1,25
60	-	1,25	2,5
75	-	2,5	2,75
100	-	2,5	5
125	-	3,75	7,5
150	1,25	3,75	10
200	3,75	5	10
250	3,75	5	10
300	5	7,5	10
400	5	10	10
500	7,5	15	20
600	10	20	20

IB-50



105 x 76 x 50
30 x 10
ø 23 mm

Primary A	Class 0,5	Class 1	Class 3
	sec. 5A or 1A / VA		
100	1,25	3,75	7,5
125	2,5	5	10
150	3,75	7,5	15
200	7,5	15	20
250	10	20	20
300	10	20	20
400	10	20	20
500	10	20	30
600	15	30	30

sec. 1A: additional cost of 20%
Dimension in mm

IBG



105 x 76 x 38
40 x 10
ø 30 mm

	Class 0,5	Class 1	Class 3
Primary A	sec. 5A or 1A / VA		
150	-	2,5	5
200	-	5	5
250	2,5	5	5
300	3,75	5	7,5
400	3,75	5	10
500	5	7,5	10
600	5	7,5	10
750	5	7,5	10
800	7,5	7,5	10
1000	10	10	15

IBG-1



105 x 76 x 38
ø 40 mm

	Class 0,5	Class 1	Class 3
Primary A	sec. 5A or 1A / VA		
150	-	2,5	5
200	-	5	5
250	2,5	5	5
300	3,75	5	7,5
400	3,75	5	10
500	5	7,5	10
600	5	7,5	10
750	5	7,5	10
800	7,5	7,5	10
1000	10	10	15

IBG-50



105 x 76 x 50
40 x 10
ø 30 mm

	Class 0,5	Class 1	Class 3
Primary A	sec. 5A or 1A / VA		
150	2,5	5	10
200	3,75	7,5	10
250	3,75	7,5	10
300	5	7,5	15
400	10	10	20
500	10	15	20
600	10	15	20
750	10	15	20
800	10	15	15
1000	15	20	20

IBR



115 x 90 x 40
50 x 15
2 x 40 x 10
ø 44 mm

	Class 0,5	Class 1	Class 3
Primary A	sec. 5A or 1A / VA		
400	5	7,5	10
500	7,5	10	10
600	10	10	15
750	10	15	15
800	10	15	20
1000	10	15	20
1200	10	15	20
1500	10	20	20
1600	10	20	30

sec. 1A: additional cost of 20%
Dimension in mm

IBR-1



115 x 90 x 40
60 x 12
2 x 50 x 10
ø 44 mm

Primary A	Class 0,5	Class 1	Class 3
	sec. 5A or 1A / VA		
400	5	7,5	10
500	7,5	10	10
600	10	10	15
750	10	15	15
800	10	15	20
1000	10	15	20
1200	10	15	20
1500	10	20	20
1600	10	20	30

IER

155 x 133 x 48
80 x 10
2 x 60 x 10
ø 50 mm



IER-1

155 x 133 x 48
ø 80 mm



IER-2

155 x 133 x 48
60 x 50



IER-3

155 x 133 x 48
80 x 30



Primary A	Class 0,5	Class 1	Class 3
	sec. 5A or 1A / VA		
250	2,5	7,5	15
300	5	10	20
400	10	15	20
500	10	15	30
600	10	15	30
750	10	15	30
800	10	15	30
1000	15	20	30
1200	15	20	30
1500	20	30	45
1600	20	30	45
2000	30	45	60

IER-4



155 x 133 x 48
100 x 30
2 x 100 x 10

Primary A	Class 0,5	Class 1
	sec. 5A or 1A / VA	
250	1,25	3,75
300	3,75	7,5
400	5	10
500	10	15
600	10	15
750	10	15
800	15	20
1000	15	20
1200	15	20
1500	20	30
1600	20	30
2000	30	45

sec. 1A: additional cost of 20%
Dimension in mm



IRP
190 x 95 x 59
100 x 20

	Class 0,5	Class 1	Class 3
Primary A	sec. 5A or 1A / VA		
750	10	15	30
800	10	15	30
1000	15	20	30
1200	15	20	30
1500	20	30	45
1600	20	30	45
2000	30	45	60
2500	45	60	60



IRM
205 x 115 x 64
2 x 100 x 10

	Class 0,5	Class 1	Class 3
Primary A	sec. 5A or 1A / VA		
1500	20	30	45
1600	20	30	45
2000	30	45	60
2500	45	60	60
3000	45	60	60
4000	60	60	60



ICM
182 x 140 x 60
2 x 100 x 20
100 x 52

	Class 0,5	Class 1	Class 3
Primary A	sec. 5A or 1A / VA		
750	15	20	30
800	15	20	30
1000	20	30	45
1200	30	45	60
1500	30	45	60
1600	30	45	60
2000	45	60	60
2500	60	60	60
3000	60	60	60



ICG
228 x 190 x 103
3 x 125 x 20
130 x 95

	Class 0,5	Class 1	Class 3
Primary A	sec. 5A or 1A / VA		
3000	60	60	60
4000	60	60	60
5000	60	60	60
6000	60	60	60

sec. 1A: additional cost of 20%
Dimension in mm

WOUND PRIMARY CURRENT

IBO

Form A

105 x 76 x 38



Form B

		Class 0,5	Class 1	Class 3	
		Primary A	sec. 5A or 1A / VA		
Form A	5	10	15	20	
	10	10	15	20	
	15	10	15	20	
	20	10	15	20	
Form B	25	10	15	20	
	30	10	15	20	
	40	10	15	20	
	50	10	15	20	
	60	10	15	20	
	75	10	15	20	
	100	10	15	20	
	125	10	15	20	
	150	10	15	20	

On request: IBO-50

CURRENT TRANSFORMERS

PROTECTION CURRENT TRANSFORMERS, CLASSIC-LINE

IB-50

105 x 76 x 50

30 x 10

ø 23 mm



	5P10	10P10	5P5	10P5
Primary A	sec. 5A or 1A / VA			
75	-	-	1,25	1,25
100	-	-	2,5	2,5
125	1,25	1,25	2,5	2,5
150	1,25	1,25	3,75	3,75
200	1,25	1,25	5	5
250	2,5	2,5	7,5	7,5
300	2,5	3,75	7,5	7,5
400	1,25	1,25	7,5	5
500	1,25	1,25	5	5
600	1,25	1,25	5	7,5

IBG-50

105 x 76 x 50

40 x 10

ø 31 mm



	5P10	10P10	5P5	10P5
Primary A	sec. 5A or 1A / VA			
150	-	-	2,5	2,5
200	1,25	1,25	2,5	2,5
250	-	-	1,25	1,25
300	-	-	1,25	1,25
400	-	-	2,5	2,5
500	-	-	2,5	3,75
600	-	-	2,5	3,75
750	-	-	3,75	5
800	-	-	-	1,25
1000	-	-	-	1,25

sec. 1A: additional cost of 20%
Dimension in mm

IBR

115 x 90 x 40 50 x 15 ø 44 mm



Primary A	5P5	10P5	5P5	10P5
	sec. 5A / VA		sec. 1A / VA	
400	1,25	1,25	1,25	1,25
500	1,25	1,25	2,5	2,5
600	2,5	2,5	2,5	2,5
750	2,5	2,5	3,75	3,75
800	2,5	2,5	3,75	3,75
1000	2,5	2,5	5	5
1200	1,25	1,25	3,75	3,75
1500	1,25	1,25	5	5

IBR-1

115 x 90 x 40 2 x 50 x 10 60 x 10 ø 44 mm



Primary A	5P5	10P5	5P5	10P5
	sec. 5A / VA		sec. 1A / VA	
400	1,25	1,25	1,25	1,25
500	1,25	1,25	2,5	2,5
600	2,5	2,5	2,5	2,5
750	2,5	2,5	3,75	3,75
800	2,5	2,5	3,75	3,75
1000	2,5	2,5	5	5
1200	1,25	1,25	3,75	3,75
1500	1,25	1,25	5	5

IER

155 x 133 x 48
80 x 10
2 x 60 x 10
ø 50 mm

IER-1

155 x 133 x 48
ø 80 mm
ø 50 mm

IER-2

155 x 133 x 48
60 x 50

IER-3

155 x 133 x 48
80 x 30



Primary A	5P10	10P10	5P5	10P5
	sec. 5A or 1A / VA			
250	-	1,25	2,5	2,5
300	1,25	1,25	3,75	3,75
400	1,25	1,25	5	5
500	2,5	2,5	7,5	7,5
600	1,25	1,25	5	5
750	2,5	2,5	7,5	7,5
800	1,25	1,25	7,5	7,5
1000	2,5	2,5	10	10
1200	2,5	3,75	10	10
1500	5	5	15	15
1600	5	5	15	15
2000	5	5	20	20

sec. 1A: additional cost of 20%
Dimension in mm



IRP
190 x 95 x 41
100 x 20

	5P10	10P10	5P5	10P5
Primary A	sec. 5A or 1A / VA			
750	1,25	1,25	7,5	7,5
800	1,25	2,5	7,5	7,5
1000	2,5	2,5	10	10
1200	3,75	3,75	10	10
1500	5	5	15	15
1600	5	5	15	15
2000	5	5	20	20
2500	7,5	7,5	20	20



IRM
205 x 115 x 46
2 x 100 x 10
3 x 30 mm

	5P10	10P10	5P5	10P5
Primary A	sec. 5A or 1A / VA			
1500	3,75	3,75	15	15
1600	5	5	15	15
2000	5	7,5	20	20
2500	7,5	7,5	20	30
3000	10	10	30	30
4000	10	10	30	45



ICM
182 x 140 x 60
2 x 100 x 20
100 x 52

	5P10	10P10	5P5	10P5
Primary A	sec. 5A or 1A / VA			
1000	5	5	15	15
1200	7,5	7,5	20	20
1500	7,5	7,5	20	20
1600	7,5	10	20	20
2000	10	10	30	30
2500	10	15	30	45
3000	10	15	45	45



ICG
228 x 190 x 103
3 x 125 x 20
130 x 95

	5P10	10P10	5P5	10P5
Primary A	sec. 5A or 1A / VA			
3000	20	20	60	60
4000	20	30	60	60
5000	30	30	60	60
6000	30	30	60	60

Additional cost sec. 1A: extra 20%
Dimension in mm

SPLIT CORE CURRENT TRANSFORMERS

IAP

123 x 120 x 62
51 x 41



Primary A	Class 0,5	Class 1	Class 3
	sec. 5A or 1A / VA		
60	-	-	1,25
75	-	-	1,25
100	-	1,25*	2,5
125	-	1,25*	3,75
150	-	2,5*	3,75
200	-	3,75*	3,75
250	-	3,75*	7,5
300	-	5*	10
400	-	7,5	20
500	5	10	30
600	10	15	30
750	10	20	45
800	10	30	60
1000	10	45	60

* only for ammeter

IAM

159 x 155 x 59
81 x 81



Primary A	Class 0,5	Class 1	Class 3
	sec. 5A or 1A / VA		
100	-	-	1,25
125	-	-	2,5
150	-	-	3,75
200	-	1,25*	3,75
250	-	2,5*	3,75
300	-	3,75*	5
400	-	5	10
500	1,25	5	15
600	2,5	7,5	20
750	7,5	15	30
800	10	20	30
1000	10	20	45
1200	10	30	60
1500	10	45	60
1600	10	45	60

* only for ammeter

IAG

200 x 163 x 60
126 x 81



Primary A	Class 0,5	Class 1	Class 3
	sec. 5A or 1A / VA		
500	-	2,5	15
600	1,25	5	15
750	1,25	10	20
800	2,5	10	20
1000	5	15	30
1200	7,5	20	45
1500	10	30	60
1600	15	45	60
2000	15	60	60
2500	20	60	60
3000	20	60	60
3500	20	60	60
4000	30	60	60

Additional cost sec. 1A: extra 20%
Dimension in mm

IA23



112 x 92.5 x 40
23 x 33

Primary A	Class 0,5	Class 1	Class 3
	sec. 5A / VA		
50	-	-	1,25
60	-	-	1,25
75	-	-	1,25
100	-	1,25*	2,5
150	-	3,75*	3,75
200	-	2,5	5
250	-	2,5	5
300	-	5	5
400	5	10	15
500	7.5	15	20
600	10	20	30

* only for ammeters
1A: on request

IA80



158 x 125 x 40
55 x 85

Primary A	Class 0,5	Class 1
	sec. 5A / VA	
250		1,25
300		2,5
400	2,5	3,75
500	3,75	5
600	5	7,5
800	10	10
1000	10	15
1200	10	15
1500	10	15

1A: on request

IA170



245 x 195 x 40
85 x 172

Primary A	Class 0,5	Class 1
	sec. 5A / VA	
500	1,25	5
600	1,25	5
750	5	10
800	7,5	10
1000	10	20
1200	15	20
1250	15	20
1500	20	30
1600	20	30
2000	25	30
2500	25	30
3000	30	45
4000	30	45
5000	30	45

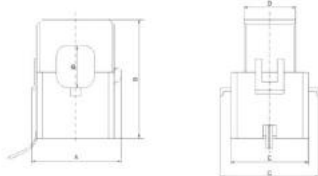
1A: on request

Additional cost sec. 1A: extra 20%
Dimension in mm

TQ10



29 x 41 x 26 max. Ø 10 mm

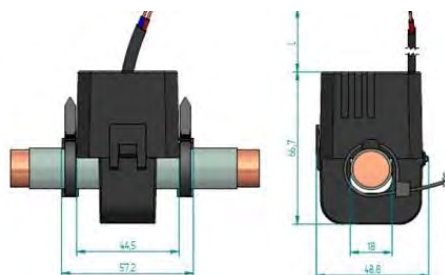


Type	Primary	Class	
TQ10	50/0.333V	1	
	60/0.333V	1	

TQ/TC



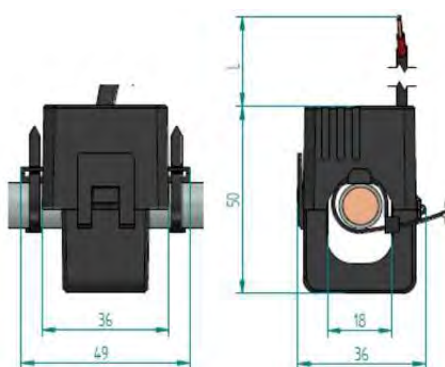
TQ-18B



Type	Primary	Class 1)	VA ²⁾	
TQ-18B	100/1	1	0,2	
	125/1	1	0,2	
	150/1	1	0,2	
	200/1	0,5	0,2	
	250/1	0,5	0,2	
	150/5	1	1	
	200/5	1	1	
	250/5	0,5	1	

TC18

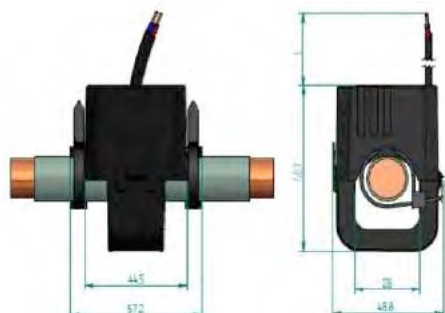
max. Ø 18mm



Type	Primary	Class 1)	VA ²⁾	
TC18	60/1	3	0,2	
	75/1	3	0,2	
	100/1	3	0,2	
	125/1	3	0,2	
	150/1	3	0,2	
	200/1	1	0,2	
	250/1	1	0,2	

TQ27

max. Ø 28mm

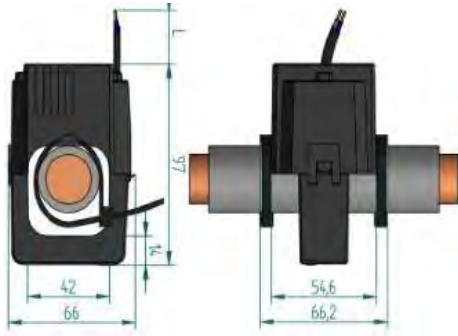


Type	Primary	Class 1)	VA ²⁾	
TQ27	200/1	1	0,2	
	250/1	1	0,2	
	300/1	1	0,2	
	400/1	1	0,2	
	500/1	0,5	0,2	
	250/5	1	1	
	300/5	1	1	
	400/5	1	1	
	500/5	1	1	

Dimensions in mm

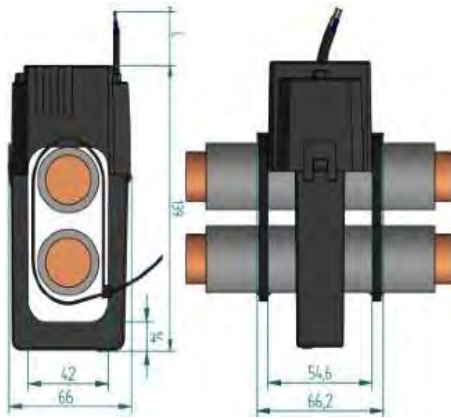
TQ42

max. Ø
42mm



TQ84

max. Ø 2x
42mm



Type	Primary	Class 1)	VA ²⁾
TQ42	250/1	1	0,5
	300/1	1	0,5
	400/1	0,5	0,5
	500/1	0,5	0,5
	600/1	0,5	0,5
	750/1	0,5	0,5
	800/1	0,5	0,5
	1000/1 ²⁾	0,5	0,5
	400/1	3	5
	600/1	3	5
	800/1	3	5
	1000/1 ²⁾	3	5
	300/5	1	0,5
	400/5	1	0,5
	500/5	1	0,5
	600/5	0,5	0,5
	750/5	0,5	0,5
	800/5	0,5	0,5
	1000/5	0,5	0,5
	400/5A	3	5
1000/5A	3	5	
TQ84	250/1	1	0,5
	300/1	1	0,5
	400/1	0,5	0,5
	500/1	0,5	0,5
	600/1	0,5	0,5
	750/1	0,5	0,5
	800/1	0,5	0,5
	1000/1	0,5	0,5
	400/1	3	5
	600/1	3	5
	800/1	3	5
	1000/1 ²⁾	3	5
	400/5	1	0,5
	500/5	1	0,5
	600/5	0,5	0,5
	750/5	0,5	0,5
	800/5	0,5	0,5
	1000/5 ³⁾	0,5	0,5
	400/5A	3	5
	1000/5A	3	5

SUMMATION

1.2.2024 +5%



Class 1
15 VA

Type	Prim. 5A / sec. 5A	Prim. 1A / sec. 1A
SSR-2		
SSR-3		
SSR-4		
SSR-5		
SSR-6		
SSR-7		
SSR-8		
SSR-9		

* On request: different primary current / Class 0,5

WITH ANALOGUE OUTPUT

SCMU210S



50 x 55 x 34
 Cable conductor: Ø 16 mm
 Primary bar: 20 x 20 mm / 30 x 10 mm

SCMU210S		
Primary	Output: 0-20 mA	Output: 0-10 V
	without auxiliary supply	
30		
40		
50		

SCMU



60 x 80 x 30
 Primary bar: 30 x 15 mm

SCMU		
Primary	Output: 0-20 mA	Output: 0-10 V
	without auxiliary supply	
60		
75		
100		
150		
200		
250		
300		
400		
500		
600		

SCMU/I



100,8 x 76 x 60
 Cable conductor: Ø 26 mm
 Primary bar: 10 x 10 mm

SCMU/I		
Primary	230V AC	24V DC
	Output: 4-20 mA	
10		
15		
20		
25		
30		
40		
50		
60		
75		
100		
150		
200		
250		
300		
400		
500		
600		

SHUNTS

Shunt with isolating base



Protection cover



Description	Price
Class 0,5	60 mV
Shunt 1A	
Shunt 1,5A	
Shunt 2A	
Shunt 2,5A	
Shunt 3A	
Shunt 4A	
Shunt 5A	
Shunt 6A	
Shunt 10A	
Shunt 12A	
Shunt 15A	
Shunt 20A	
Shunt 25A	
Shunt 30A	
Shunt 40A	
Shunt 50A	
Shunt 60A	
Shunt 75A	
Shunt 80A	
Shunt 100A	
Shunt 125A	
Shunt 150A	
Shunt 160A	
Shunt 200A	
Shunt 250A	
Shunt 300A (Base 250A)	
Shunt 300A (Base 400A)	
Shunt 400A	
Shunt 500A	
Shunt 600A	
Shunt 800A (Base 600A)	
Shunt 800A (Base 1000A)	
Shunt 1000A	
Shunt 1500A	
Shunt 2000A	
Shunt 2500A	
Shunt 3000A	
Shunt 4000A	
Shunt 5000A	
Shunt 6000A	
Shunt 8000A	
Shunt 10000A	
Shunt 12000A	
Shunt 15000A	

Description	Price
Class 0,5	150 mV
Shunt 1A	
Shunt 1,5A	
Shunt 2A	
Shunt 2,5A	
Shunt 3A	
Shunt 4A	
Shunt 5A	
Shunt 6A	
Shunt 10A	
Shunt 12A	
Shunt 15A	
Shunt 20A (Base 25A)	
Shunt 25A	
Shunt 30A (Base 150A)	
Shunt 40A	
Shunt 50A (Base 150A)	
Shunt 60A	
Shunt 75A (Base 150A)	
Shunt 80A (Base 150A)	
Shunt 100A	
Shunt 125A	
Shunt 150A	
Shunt 160A (Base 150A)	
Shunt 200A (Base 150A)	
Shunt 250A	
Shunt 300A (Base 250A)	
Shunt 300A (Base 400A)	
Shunt 400A	
Shunt 500A (Base 400A)	
Shunt 600A	
Shunt 800A (Base 600A)	
Shunt 800A (Base 1000A)	
Shunt 1000A	
Shunt 1500A	
Shunt 2000A	
Shunt 2500A	
Shunt 3000A	
Shunt 4000A	
Shunt 5000A	
Shunt 6000A	
Shunt 8000A	
Shunt 10000A	
Shunt 12000A	
Shunt 15000A	

Other ranges
Included isolating base until 20A
Isolating base or protection cover
Additional cost for class 0,2

TRANSDUCERS

TRANSDUCERS FOR CURRENT / VOLTAGE



CIP-CA / CIP-CV

True RMS
 Class 0.2
 Auxiliar supply:
 40V-300V AC/DC
 or 24V-60V AC/DC
 Output: 0-20mA, 4-20mA, 0-10V (other outputs, on request)

Type	Description	
CIP-CA	Compact 1 output	
CIP-CV	Compact 1 output	

TRANSDUCERS FOR CURRENT OR VOLTAGE



CIP-I / CIP-V

True RMS
 Class 0.2
 Display LCD (Programmable)
 Auxiliar supply:
 60V-300V AC/DC
 or 24V-60V AC/DC
 Output: 0-20mA, 4-20mA, 0-10V (other outputs, on request)

Type	Description		
CIP-I	Programmable	1 output	
CIP-I	Programmable	2 output	
CIP-V	Programmable	1 output	
CIP-V	Programmable	2 output	

TRANSDUCER FOR FREQUENCY



CIP-Hz

True RMS
 Class 0.2
 Display LCD (Programmable)
 Auxiliar supply:
 60V-300V AC/DC
 or 24V-60V AC/DC
 Output: 0-20mA, 4-20mA, 0-10V (other outputs, on request)

Type	Description		
CIP-Hz	Programmable	1 output	

TRANSDUCER OF POWER



CIP-P / CIP-Q

True RMS
 Class 0.2
 Display LCD (Programmable)
 Auxiliar supply:
 60V-300V AC/DC
 or 24V-60V AC/DC
 Output: 0-20mA, 4-20mA, 0-10V (other outputs, on request)
 Optional: RS485 communication

CIP-P : Active Power

- CIP-P/1w Single phase
- CIP-P/1d 3 phases - 3 wire - Balanced load
- CIP-P/2 3 phases - 3 wire - Unbalanced load
- CIP-P/1 3 phases - 4 wire - Balanced load
- CIP-P/3 3 phases - 4 wire - Unbalanced load

Type	Description	
CIP-P	Programmable	1 output
	Programmable	2 Output

CIP-Q : Reactive Power

- CIP-P/1wb Single phase
- CIP-P/1db 3 phases - 3 wire - Balanced load
- CIP-P/2db 3 phases - 3 wire - Unbalanced load
- CIP-P/1b 3 phases - 4 wire - Balanced load
- CIP-P/3b 3 phases - 4 wire - Unbalanced load

CONFIGURABLE MULTIFUNCIONAL TRANSDUCERS

CPQT



CPQT13



Type	CPQT	CPQT13
Input - Voltage	100-400V	100-400V
Frequency	10...40...70...120 Hz	10...40...70...120 Hz
Input - current	1A-5A	1A-5A
Auxiliary supply	24-250V DC 80-50V AC	24-250V DC 80-50V AC
Range	+/-20mA Option: +/- 10V	+/-20mA Option: +/- 10V
Analogue outputs	2	5
Digital output	-	2
Communication	-	RS485
Price		

SWITCHES

TP Serie

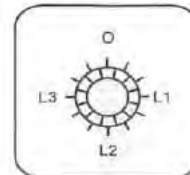
TP-731

AMMETER SWITCH WITH "0" POSITION

1 pole, 3 current transformers

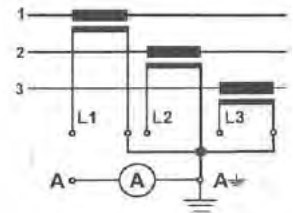


Technical data	
Degree of protection	IP65
Rated current	$I_n = 16A$
Rated voltage	690V
Panel mounting	



90 Degree

Connecting Diagram



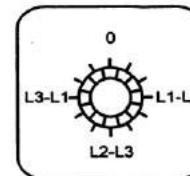
TP-701

VOLTMETER SWITCH WITH "0" POSITION

1 pole, 3 phases against neutral (phase-neutral)

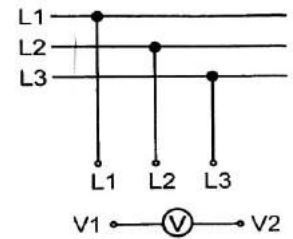


Technical data	
Degree of protection	IP65
Rated current	$I_n = 16A$
Rated voltage	690V
Panel mounting	



90 Degree

Connecting Diagram



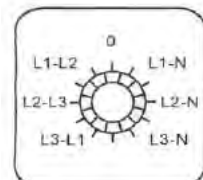
TP-705

VOLTMETER SWITCH WITH "0" POSITION

3 phases to phase voltage (phase-phase) and 3 phases against neutral (phase-neutral)

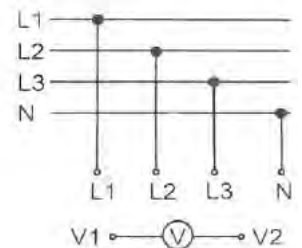


Technical data	
Degree of protection	IP65
Rated current	$I_n = 16A$
Rated voltage	690V
Panel mounting	



45 Degree

Connecting Diagram



POSITION INDICATORS

PI / PIR



For DC voltages

Type	PI24	PI25	PI36	PI29	PI39
Front frame	□ 24,0	□ 25,0	□ 36,0	○ 29,0	○ 39,0
Housing	Ø 21,8	Ø 21,8	Ø 21,8	Ø 21,8	Ø 21,8
Voltage	DC 24 -230 V				
Price					



For AC voltages

Type	PIR24	PIR25	PIR36	PIR29	PIR39
Front frame	□ 24,0	□ 25,0	□ 36,0	○ 29,0	○ 39,0
Housing	Ø 21,8	Ø 21,8	Ø 21,8	Ø 21,8	Ø 21,8
Voltage	AC 24 -230 V				
Price					

ACCESSORIES FOR ANALOGUE INSTRUMENTS

SCALES



We supply the printed scales as special accessory.
On request: strokes and stripes in different colors.
All scales are printed according to standard DIN

SPECIALS EXECUTIONS

GENERAL / Description	
Antireflesive glass for EQ/PQ	
Antireflesive glass for EQ SWT or 240°	
Double scale	
Scales in other magnitudes	
Interior light (If possible)	
Inscriptions in the scale	
Non-standard divisions	
Red mark	
Color stripe	
Mounting position in an other than vertical	
Error curve certificate	
Calibration certificate (simple instrument)	
Calibration certificate (double instrument)	

MOVING IRON PANEL / Description	
Non-standard values	
Scale 1,2 In = 20% overload	
Scale 2 In = 2 times overload	
Scale 5 In = 5 times overload	
Calibration for DC	

MOVING COIL PANEL / Description	
Zero center scale	
High impedance	
Non-standard values	
Setting class 1 (possible)	
Overload scale (if possible)	

SNAP-IN COVERS



Description	
Snap-in covers 48x48 Ref. 110-1113	
Snap-in covers 72x72 Ref. 111-1337	
Snap-in covers 96x96 Ref. 112-1282	

BLIND COVER WITH GLASS



Description	
Blind cover with glass 48x48 / Transparent glass *	
Blind cover with glass 72x72 / Transparent glass	
Blind cover with glass 96x96 / Transparent glass	
Blind cover with glass 144x144 / Transparent glass	
Blind cover with glass 48x48 / White glass	
Blind cover with glass 72x72 / White glass	
Blind cover with glass 96x96 / White glass	
Blind cover with glass 144x144 / White glass	

* up to 500 pieces

MOUNTING SCREWS-/CLIPS



Description	
Plastic clips for "n" versions	
Screws for "n" versions	

RUBBER GASKETS



Description	
Rubber gaskets 48x48 Ref. 110-1028	
Rubber gaskets 72x72 Ref. 111-1291	
Rubber gaskets 96x96 Ref. 112-1322	
Rubber gaskets 144x144 Ref. 113-1215	

IP65 PROTECTION COVER



Description	
IP65 Protection cover 48x48	
IP65 Protection cover 72x72	
IP65 Protection cover 96x96	

TERMINAL COVERS



Description	
Terminal covers 48x48	
Terminal covers 72x72	
Terminal covers 96x96	

ACCESSORIES FOR CURRENT TRANSFORMERS

SNAP ON MOUNTING (DIN RAIL)



Description	
Snap on mounting (DIN Rail) for IBA, IBP	
Snap on mounting (DIN Rail) for IB, IB-50	
Snap on mounting (DIN Rail) for IBG, IBG-50	
Snap on mounting (DIN Rail) for IBO	
Snap on mounting (DIN Rail) for SCMU20S, SCMU, SCMU/I	
Snap on mounting (DIN Rail) for AST	

MOUNTING FEET



Description	
Mounting feet for IBA, IBP	
Mounting feet for IB, IB-50, IBG, IBG-50	
Mounting feet for IBR,IBR/1,IAP,IAM,IAG	
Mounting feet for IBO	
Mounting feet for SCMU210S, SCMU, SCMU/I (plastic)	
Mounting feet for SCMU210S, SCMU, SCMU/I (metal)	
Mounting feet for AST (plastic)	
Mounting feet for AST (metal)	



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