Crompton Instruments Catalist

Preferred Range Catalogue

Edition 4

TE connectivity ENERGY

Crompton Instruments Power Measurement, Control and Protection Solutions

TE Connectivity offers one of the largest product ranges of power measurement, control and protection instrumentation for switchgear and generator set manufacturers, panel builders and OEMs. Crompton Instruments branded products offer proven reliability across a diverse array of industries including power generation, process control, test and measurement, utility, marine, defence and energy management applications.

This combined catalogue and price list presents a small selection of our complete product portfolio and is in no way exhaustive.

For comprehensive information of our complete product range please visit our web site **www.crompton-instruments.com**

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DIN-rail Protector Trip Relays

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Q2C Wiring Solution
Quick and error free wiring

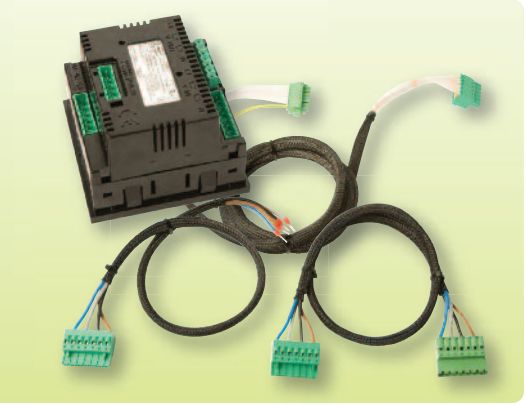
Q2C 3-in-1 CT

Q2C Wiring Solution

Integra Ci5 Digital Metering System

- Voltage In and Out connection
- Pulsed and Modbus RTU RS485 fitted as standard
- Programmable CT ratio
- True rms/THD measurement
- Self powered, no need for additional auxiliary supply for screen display operation
- User programmable, single-phase or 3-phase 4-wire system configuration
- Easy 'clip-in' panel mounting
- New blue on black backlit LCD screen

Description	Part number
Integra Ci5 meter (pulsed & Modbus RTU RS485)	CI5-01
Ci5 terminal/connector pack (optional for user to produce own looms)	CI5-TERM-01



Wiring Looms with Integral Clips

- High pull resistance connectors for durable use
- Pre-cut specific to application for easier cable dressing
- Voltage looms are multipurpose - can be used for first incoming voltage supply and for additional meter looping

Loom	Description	Length (m)	Part number
1	Fuses to voltage loom	0.5	QCFV-01
1	Fuses to voltage loom	1	QCFV-02
2	Voltage to voltage loom	0.6	QCVV-01
2	Voltage to voltage loom	0.9	QCVV-02
2	Voltage to voltage loom	1.2	QCVV-03
3	CT to meter loom	1.5	QCCTM-01
3	CT to meter loom	1.25	QCCTM-02
3	CT to meter loom	2.5	QCCTM-03
3	CT to meter loom	0.5	QCCTM-04
3	Open ended loom/harness CT fixed/open at meter connection 3K54401 SHT	1.5	QCCTO-01
3	Open ended loom/harness CT fixed/open at meter connection 3K54401 SHT	0.5	QCCTO-02
3	Open ended loom/harness CT open/fixed at meter connection 3K54401 SHT	1.5	QCMCTO-01
3	Open ended loom/harness CT open/fixed at meter connection 3K54401 SHT	0.5	QCMCTO-02

QC 3-in-1 Current Transformers

- Reversible mounting LHS and RHS
- Internal grounding/earthing facility
- Supplied with connector

A range of 3-in-1 current transformers for use with or without the Q2C solution. The 3-in-1 current transformers combine three traditional current transformers in one moulded case with a pluggable locking connector for simple and easy installation.

Part number	Ratio	Burden VA against class index			Aperture
			Class 0.5	Class 1	Class 3
QC3N1-25-60/5	60/5	-	1	2	3 @ 15x25
QC3N1-25-100/5	100/5	-	1.5	2.5	3 @ 15x25
QC3N1-25-125/5	125/5	-	1.5	2.5	3 @ 15x25
QC3N1-25-160/5	160/5	1.5	1.5	2.5	3 @ 15x25
QC3N1-35-100/5	100/5	-	1.5	2	3 @ 21x25
QC3N1-35-125/5	125/5	-	1.5	2.5	3 @ 21x25
QC3N1-35-160/5	160/5	1.5	1.5	2.5	3 @ 21x25
QC3N1-35-250/5	250/5	1.5	1.5	2.5	3 @ 21x25

Integra Digital Metering Systems

Integra Ri3 Digital Metering System

The Integra Ri3 dms is an accurate and cost effective solution for measurement and display of all major electrical and power quality parameters with easy programming and user friendly navigation in DIN 43880 enclosure. The product features a DIN-rail enclosure, backlit LCD display and user programmable CT ratios. Integra Ri3 dms measures 17 electrical parameters including total harmonic distortion (THD) measurement up to the 31st harmonic.

Description	Part number
Integra Ri3 base unit	RI3-01

- Pulsed output and Modbus as standard
- Programmable CT ratio
- True rms measurement
- User programmable system configuration
- Simple navigation
- UK manufactured

Ri3/Ci3/Ci5 Parameters

Button	Screen	Parameters
CT	1	CT ratio
V/Hz	1	Volts L1 - N
		Volts L2 - N
		Volts L3 - N
	2	Volts L1 - L2
		Volts L2 - L3
		Volts L3 - L1
	3	Frequency
	4	Volts L1 - N THD%
		Volts L2 - N THD%
		Volts L3 - N THD%
	5	Volts L1 - L2 THD%
		Volts L2 - L3 THD%
		Volts L3 - L1 THD%
A	1	Current L1
		Current L2
		Current L3
	2	Neutral current
	3	L1 Current max demand
		L2 Current max demand
		L3 Current max demand
	4	Neutral current max demand
	5	Current L1 THD%
		Current L2 THD%
		Current L3 THD%
P/PF	1	kW
		kVAr
		kVA
	2	kW Max demand
	3	Power factor
E	1	kWh
	2	kVArh
	3	Import kVArh*
	4	Export kVArh*

*Ri3 only

Integra Ci3 Digital Metering System

The Integra Ci3 digital metering system is an accurate and cost effective solution for measurement and display of all major electrical and power quality parameters. Its easy programming, mounting and user-friendly navigation make the Integra Ci3 dms an ideal choice for customers who require reliable energy measurement.

Description	Part number
Integra Ci3 base unit	CI3-01
Options	
Pulsed output	CI-PUL-01
Modbus RTU RS485 communication output	CI-MOD-01
Accessories	
IP65 protective cover	3 G365 02
IP54 panel gasket	3 C345 01

- Bezel depth 6.1mm
- Plug-in output modules
- Programmable CT ratio
- True rms measurement
- User programmable system configuration
- UK manufactured
- Easy 'clip-in' panel mounting

Integra Ci5 Digital Metering System

Description	Part number
Integra Ci5 meter (Pulsed & Modbus RTU RS485)	CI5-01
Ci5 Terminal/connector pack (optional for user to produce own looms)	CI5-TERM-01

- New backlit LCD screen
- Voltage In and Out connection
- Pulsed & Modbus RTU RS485 fitted as standard
- Programmable CT ratio
- True rms measurement
- User programmable system configuration
- Intuitive navigation
- UK manufactured
- Easy 'clip-in' panel mounting

Integra 1630 Digital Metering System

Integra 1630 digital metering system provides high accuracy 0.2% measurement, display and communication of all major parameters including total harmonic distortion (THD) up to the 31st harmonic. The range includes single-phase, three-phase three-wire and three-phase four-wire capability, selectable at the point of installation.

- LED display
- 0.2% accuracy
- LED annunciators for each measured parameter
- User programmable system configuration (4-wire default)
- Fully programmable VT and CT ratios
- Current demand per phase
- Elapsed time counter for connected loads
- Removable bezel for very low profile applications

Measured Parameters

- System (average) volts, System (average) current, System (total) kW
- System volts (average) THD% System current (average) THD%
- Phase – neutral, Voltage (L-N) (4-wire only), Phase – phase Voltage (L-L) (3-wire only)
- Voltage THD% L-L (3 and 4-wire) Voltage THD% L-N (4-wire only)
- Phase current
- Current THD%
- Neutral current (4-wire only) Frequency and Power factor (overall)
- kVAr kVA kW
- kWh import (7-digit resolution)
- kVArh import (7-digit resolution)
- kWh export (7-digit resolution)
- kVArh export (7-digit resolution)
- kW demand current demand
- Maximum kW demand Maximum current demand
- Hours run

Description	Cat. no.
1-phase, 3-phase 3/4-wire, 100-240V L-L, 5A CT input, Aux. 100-250V AC/DC	INT-1630-L-5-M-option
1-phase, 3-phase 3/4-wire, 241-480V L-L, 5A CT input, Aux. 100-250V AC/DC	INT-1630-M-5-M-option
Options	
Modbus RTU RS485 interface	010
Modbus RTU RS485 interface + 1kWhr pulsed output	110
Modbus RTU RS485 interface + 2kWhr pulsed outputs	210
Modbus TCP	070
Modbus IP BACnet	080
BACnet MSTP	090
Optional extra	
Extended collar	OPT-1630-collar

Integra 1530 Digital Metering System

System	Parameters	Cat. no.
1-phase	Input 140-277V L-N, 5A CT operated. Auxiliary power 100-250V AC/DC	INT-1531-M-5-M
3-phase, 3-wire	Input 241V-480V L-L, 5A CT operated. Auxiliary power 100-250V AC/DC	INT-1533-M-5-M
3-phase, 4-wire	Input 241V-480V L-L, 5A CT operated. Auxiliary power 100-250V AC/DC	INT-1534-M-5-M
3-phase, 4-wire With Neutral CT	Input 241V-480V L-L, 5A CT operated. Auxiliary power 100-250V AC/DC	INT-1535-M-5-M
Options		
Voltage input	For voltage input 100-240V L-L change M- to	L-
Current input	For current input 1A, change 5- to	1-
Auxiliary power	For auxiliary power 12 to 48V DC change -M	-L

Integra 1530 digital metering system is available with:

- Lonworks
- Analogue output
- True neutral current measurement

Please consult customer services for further information. Customer service 0870 870 7500.

Communications & Output Options	Add comm. option
1 x Analogue output	-001
2 x Analogue output	-002
1 x Modbus RTU RS485 port + 1 x Analogue output	-011
1 x Modbus RTU RS485 port + 2 x Analogue output	-012
Lonworks Interface	-030
1 x Pulsed output for energy + 1 x Analogue output (not available INT-1535)	-101
1 x Pulsed output for energy + 2 x Analogue output (not available INT-1535)	-102
1 x RS485 Modbus Port + 1 x Pulsed Output for Energy + 1 x Analogue Output (not available INT-1535)	-111
1 x RS485 Modbus Port + 1 x Pulsed Output for Energy + 2 x Analogue Output (not available INT-1535)	-112

kWh Meters

Integra Ci1 kWh Meter

The Integra Ci1 energy meter is specially designed and developed as a cost effective Watt hour and VAr hour meter to complement the current Integra Ci series. The Integra Ci1 self-contained 96mm DIN panel mounted Watt hour, VAr hour meter measures the real consumption of active and reactive energy to Class 1.0 accuracy.

- DIN 96 enclosure
- Backlit LCD screen
- Bezel depth 6.1mm
- Plug-in output modules
- Programmable CT ratio
- User programmable system configuration
- Phase diagnostic indication
- System running indication
- Removable energy threshold (1%)

Running icon indicates Wh and VAhr accumulation.

Product Code

Description	Part number
Integra Ci1 base unit	CI1-01
Options	
Pulsed output	CI-PUL-01
Modbus RTU RS485 communication output	CI-MOD-01
Accessories	
IP65 protective cover	3 G365 02
IP54 panel gasket	3 C345 01

Parameters

Button	Screen	Parameters
CT	1	CT ratio
Wh	2 3	IMPORT Wh EXPORT Wh
VArh	4 5	IMPORT VArh EXPORT VArh
TEST	6	Phase sequence diagnostic

DRK kWh Meters

Self-contained energy metering system which is ideal for switchgear, plant instrumentation and process control. The range has significant advantages over the traditional energy meters with pulsed outputs, and direct connection as standard.

Single-phase: 230V – Direct Connected 63A

Description	Part number
1-phase 230V–63A direct connected, pulsed output (Opto) LCD screen	DRK-1P-230-D63

Three-phase: 230V (400V) – Direct Connected 100A

Description	Part number
3-phase 230V L-N (400V L-L) – 100A direct connected, pulsed output (Opto), LCD screen	DRK-3P-400-D100

MID Energy Meters

The MID approved energy meters range is available for single and three phase systems and the range features include a blue backlit LCD screen, direct or CT connection capability, sealable terminal covers, and tariff identifier display. Energy consumption can be remotely monitored via SO pulse outputs or can be communicated with Modbus RS 485 RTU, M-Bus, KNX and SD card datalogger interfaces

Energy meter single-phase with IR side coms. option (DRM- Comms)

Description	DIN mod.	Cat. no.
LCD kWh/kWArh, 2 tariffs, 2S0, 80 Amp - MID	3	DRM-80-1P
LCD kWh/kVArh, 2 tariffs, 2S0, 125 Amp - MID	3	DRM-125-1P

Energy meter three-phase with IR side coms. option (DRM- Comms)

Description	DIN mod.	Cat. no.
LCD kWh/kVArh 125A, 2 tariffs, 2S0, - MID	6	DRM-125-3P

Communication system (DRM-Comms)

Description	DIN mod.	Cat. no.
Modbus-Rtu/ASCII, Full reading	1	DRM-MOD

Energy meter three-phase basic

Description	DIN mod.	Cat. no.
LCD kWh ../5A, 2 tariffs, 2S0, - MID	4	DRB-5-3P
LCD kWh 80A, 2 tariffs, 2S0, - MID	4	DRB-80-3P

Energy meter three-phase basic, with integral Modbus, full reading

Description	DIN mod.	Cat. no.
LCD kWh ../5A, 2 tariffs, - MID	4	DRB-5-3P-MOD
LCD kWh 80A, 2 tariffs, - MID	4	DRB-80-3P-MOD

3-in-1 Current Transformers

A range of 3-in-1 current transformers combining three traditional current transformers in one moulded case. 3-in-1 current transformers can be directly installed in line with a three-phase moulded case circuit breaker, thus saving installation time where fitting three standard individual current transformers would be required. The M3N1 range of current transformers offers primary currents between 60-630A with 5A secondaries with up to Class 0.5 accuracy performance.

Plug-in metal feet, DIN-rail clips and busbar mounting are supplied as standard.

Case size: 75mm wide x 60mm deep x 80mm high

Part number	Ratio	Burden VA against Class index			Aperture (mm) Class
		0.5	Class 1	Class 3	
M3N1-25-60/5	60/5	-	1	2	3@15 x 25mm
M3N1-25-100/5	100/5	-	1.5	2.5	3@15 x 25mm
M3N1-25-125/5	125/5	-	1.5	2.5	3@15 x 25mm
M3N1-25-150/5	150/5	1.5	1.5	2.5	3@15 x 25mm
M3N1-25-160/5	160/5	1.5	1.5	2.5	3@15 x 25mm

Case size: 105mm wide x 38mm deep x 80mm high

Part number	Ratio	Burden VA against Class index			Aperture (mm) Class
		0.5	Class 1	Class 3	
M3N1-35-100/5	100/5	-	1.5	2	3@21 x 25mm
M3N1-35-125/5	125/5	-	1.5	2.5	3@21 x 25mm
M3N1-35-150/5	150/5	-	1.5	2.5	3@21 x 25mm
M3N1-35-160/5	160/5	1.5	1.5	2.5	3@21 x 25mm
M3N1-35-200/5	200/5	1.5	1.5	2.5	3@21 x 25mm
M3N1-35-250/5	250/5	1.5	1.5	2.5	3@21 x 25mm

Case size: 141mm wide x 38mm deep x 95mm high

Part number	Ratio	Burden VA against Class index			Aperture (mm) Class
		0.5	Class 1	Class 3	
M3N1-45-250/5	250/5	1.5	1.5	2.5	3@31 x 31mm
M3N1-45-300/5	300/5	2.5	2.5	3.75	3@31 x 31mm
M3N1-45-400/5	400/5	2.5	2.5	3.75	3@31 x 31mm
M3N1-45-500/5	500/5	2.5	2.5	3.75	3@31 x 31mm
M3N1-45-600/5	600/5	2.5	2.5	3.75	3@31 x 31mm
M3N1-45-630/5	630/5	2.5	2.5	3.75	3@31 x 31mm

Moulded Case Current Transformers

The range of Crompton Instruments Ebony current transformers offers wide system current ratings, apertures and case sizes to suit every application. Manufactured to meet IEC 60044-1:2003 the range benefits include ratio rating from 5/5 to 4000/5, accuracy up to Class 0.5, integral terminal cover for safety and multiple mounting options.

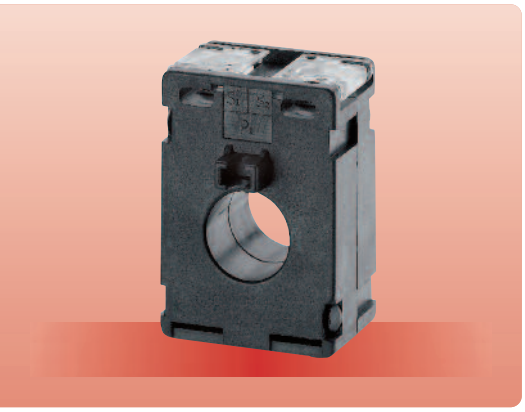
MA5Y Range

Case Size: 77mm wide x 50mm deep x 116mm high 3" wide x 2" deep x 4.5" high
Fixing: M8 stud primary bar
Weight: 0.45Kg

Part number	Ratio range	VA at Class 3	VA at Class 1
MA5Y-5/5	5/5	7.5	5
MA5Y-10/5	10/5	7.5	5
MA5Y-15/5	15/5	7.5	5
MA5Y-20/5	20/5	7.5	5
MA5Y-30/5	30/5	7.5	5
MA5Y-40/5	40/5	7.5	5

Ordering Codes

MA5Y	Add suffix to depict required ratio range. For example: MA5Y-5/5
M50-DINCLIP	DIN-rail mounting clip for DIN-rail mounting option (2 required)



M53Q Range

Case Size: 45mm wide x 30mm deep x 65mm high 1.8" wide x 1.2" deep x 2.5" high
Aperture: 20 x 6mm and 21mm diameter 0.8" x 0.2" and 0.8" diameter
Weight: 0.25Kg

Part number	Ratio range	VA at Class 3	VA at Class 1
M53Q-50/5	50/5	1	-
M53Q-60/5	60/5	1.25	-
M53Q-80/5	80/5	1.5	-
M53Q-100/5	100/5	2.5	1.5
M53Q-125/5	125/5	3	2.5
M53Q-150/5	150/5	3.75	2.5
M53Q-200/5	200/5	5	3.75
M53Q-250/5	250/5	-	5
M53Q-300/5	300/5	7.5	5

Ordering Codes

M53Q	Add suffix to depict required ratio range. For example: M53Q-50/5
M30-DINCLIP	DIN-rail mounting clip for DIN-rail mounting option (2 required)

M55E Range

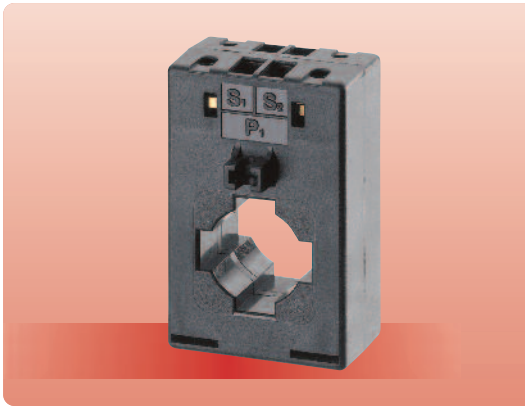
Case Size: 50mm wide x 50mm deep x 80mm high 2" wide x 2" deep x 3.1" high
Aperture: 16.2 diameter and 15 x 5mm 0.68" diameter
Weight: 0.4Kg

Part number	Ratio range	VA at Class 3	VA at Class 1
M55E-30/5	30/5	1.25	-
M55E-40/5	40/5	2.5	-
M55E-50/5	50/5	2.5	-
M55E-60/5	60/5	3.75	2.5
M55E-80/5	80/5	5	3.75

Ordering Codes

M55E	Add suffix to depict required ratio range. For example: M55E-20/5
M50-DINCLIP	DIN-rail mounting clip for DIN-rail mounting option (2 required)

M53J Range



Case Size: 50mm wide x 30mm deep x 80mm high 2" wide x 1.2" deep x 3.1" high
Aperture: 30 x 10mm, 25 x 15mm and 20 x 20mm and 25mm diameter
1.2" x 0.4", 1" x 0.6" and 0.8" x 0.8" and 1.0" diameter
Weight: 0.22Kg

Part number	Ratio range	VA at Class 3	VA at Class 1
M53J-100/5	100/5	1.25	-
M53J-125/5	125/5	1.25	-
M53J-150/5	150/5	2.5	-
M53J-200/5	200/5	2.5	2.5
M53J-250/5	250/5	3.75	2.5
M53J-300/5	300/5	5	3.75
M53J-400/5	400/5	7.5	3.75

Ordering Codes

M53J	Add suffix to depict required ratio range. For example: M53J-100/5
M30-DINCLIP	DIN-rail mounting clip for DIN-rail mounting option (2 required)

M63N Range

Case Size: 60mm wide x 30mm deep x 94mm high 2.3" wide x 1.2" deep x 3.7" high
Aperture: 40 x 10mm and 32mm diameter 1.5" x 0.4" and 1.2" diameter
Weight: 0.3Kg

Part number	Ratio range	VA at Class 3	VA at Class 1	VA at Class 0.5
M63N-200/5	200/5	2.5	-	-
M63N-250/5	250/5	3.75	2.5	-
M63N-400/5	400/5	7.5	5	-
M63N-500/5	500/5	10	7.5	3.75
M63N-600/5	600/5	10	7.5	5
M63N-800/5	800/5	15	10	7.5

Ordering Codes

M63N	Add suffix to depict required ratio range. For example: M63N-200/5
M30-DINCLIP	DIN-rail mounting clip for DIN-rail mounting option (2 required)

M93L Range

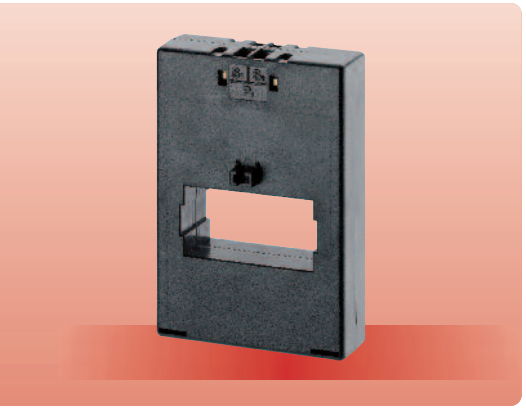
Case Size: 90mm wide x 30mm deep x 131mm high 3.5" wide x 1.2" deep x 5.1" high
Aperture: 50 x 10mm, 40 x 30mm and 42mm diameter 2" x 0.4", 1.5" x 1.2"
and 1.6" diameter
Weight: 0.45Kg

Part number	Ratio range	VA at Class 3	VA at Class 1	VA at Class 0.5
M93L-400/5	400/5	15	7.5	3.75
M93L-600/5	600/5	30	20	10
M93L-800/5	800/5	20	15	10

Ordering Codes

M93L	Add suffix to depict required ratio range. For example: M93L-400/5
M30-DINCLIP	DIN-rail mounting clip for DIN-rail mounting option (2 required)

For details of extended input current range from 100 to 1600 Amps, 1 Amp secondaries, intermediate ratios or protection CTs, contact sales or visit our website at www.crompton-instruments.com



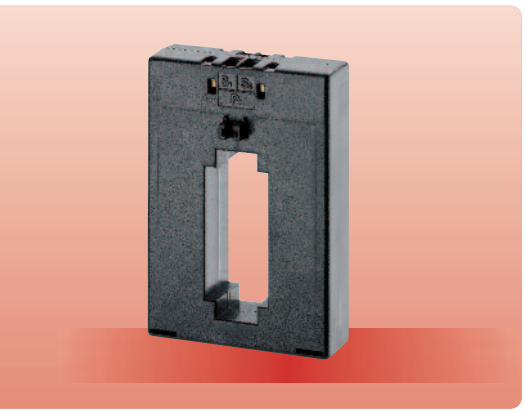
M93R Range

Case Size: 90mm wide x 30mm deep x 131mm high 3.5" wide x 1.2" deep x 5.1" high
Aperture: 64 x 12.6mm, 60 x 30mm 2.5" x 0.5", 2.4" x 1.2"
Weight: 0.6Kg

Part number	Ratio range	VA at Class 3	VA at Class 1	VA at Class 0.5
M93R-800/5	800/5	10	10	5
M93R-1000/5	1000/5	15	10	7.5
M93R-1200/5	1200/5	20	15	10
M93R-1250/5	1250/5	20	15	10
M93R-1600/5	1600/5	20	20	15
M93R-2000/5	2000/5	30	20	20

Ordering Codes

M93R	Add suffix to depict required ratio range. For example: M93R-800/5
M30-DINCLIP	DIN-rail mounting clip for DIN-rail mounting option (2 required)



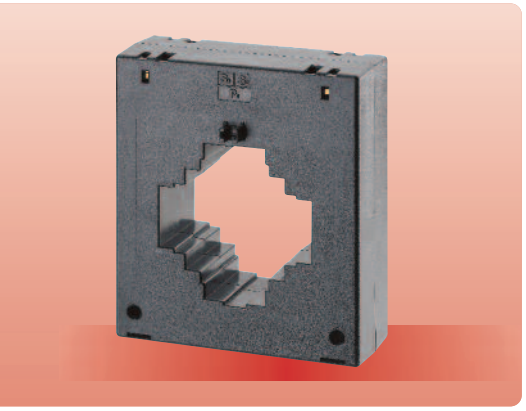
M93S Range

Case Size: 90mm wide x 30mm deep x 131mm high 3.5" wide x 1.2" deep x 5.1" high
Aperture: 76.5 x 19mm, 60 x 30mm 3.0" x 0.7", 2.4" x 1.2"
Weight: 0.7Kg

Part number	Ratio range	VA at Class 3	VA at Class 1	VA at Class 0.5
M93S-800/5	800	10	10	5 26.70
M93S-1000/5	1000	150	10	7.5 26.70
M93S-1200/5	1200	20	15	10 26.70
M93S-1250/5	1250	20	20	15 26.70
M93S-1600/5	1600	30	20	15 26.70
M93S-2000/5	2000	30	20	15 26.70

Ordering Codes

As above	Change end suffix to depict required secondary. For example: M93S-1000/1
M30-DINCLIP	DIN-rail mounting clip for DIN-rail mounting option (2 required)



MB5D Range

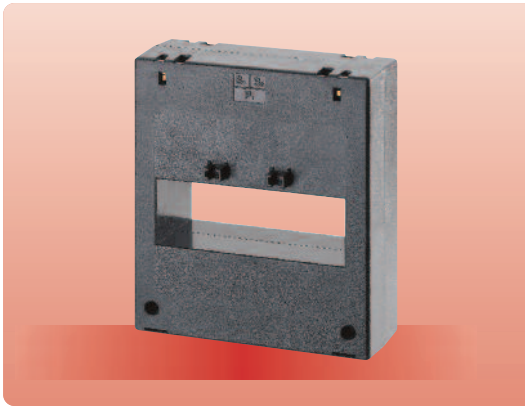
Case Size: 134mm wide x 50mm deep x 156mm high 5.2" wide x 2" deep x 6.1" high
Aperture: 80 x 30mm, 60 x 30mm, 50 x 50mm and 63mm diameter
3.1" x 1.2", 2.3" x 1.2", 2 x 2" and 2.4" diameter
Weight: 0.5Kg

Part number	Ratio range	VA at Class 3	VA at Class 1	VA at Class 0.5
MB5D-400/5	400/5	15	10	7.5
MB5D-600/5	600/5	15	10	5
MB5D-800/5	800/5	20	15	7.5
MB5D-1000/5	1000/5	22.5	20	10
MB5D-1250/5	1250/5	30	20	15
MB5D-1600/5	1600/5	40	30	20

Ordering Codes

MB5D	Add suffix to depict required ratio range. For example: MB5D-400/5
M50-DINCLIP	DIN-rail mounting clip for DIN-rail mounting option (2 required)

MB5Z Range



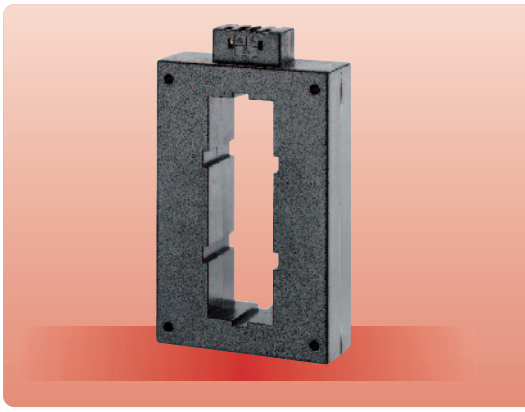
Case Size: 134mm wide x 50mm deep x 156mm high 5.2" wide x 2" deep x 6.1" high
Aperture: 104 x 35mm, 35mm diameter 4" x 1.3" and 1.3" diameter
Weight: 0.7Kg

Part number	Ratio range	VA at Class 3	VA at Class 1	VA at Class 0.5
MB5Z-1600/5	1600/5	30	20	15
MB5Z-2000/5	2000/5	30	20	15
MB5Z-2500/5	2500/5	30	20	15
MB5Z-3000/5	3000/5	30	20	15

Ordering Codes

MB5Z	Add suffix to depict required ratio range. For example: MB5Z-750/5
M50-DINCLIP	DIN-rail mounting clip for DIN-rail mounting option (2 required)

MC5T Range



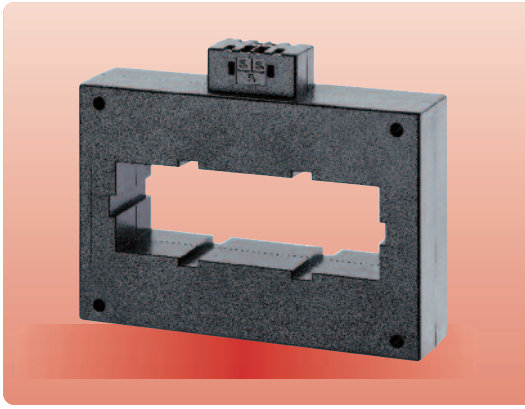
Case Size: 140mm wide x 50mm deep x 238mm high5.5" wide x 2" deep x 9.3" high
Aperture: 160 x 50mm 6.3" x 2"
Weight: +/-1.5Kg

Part number	Ratio range	VA at Class 3	VA at Class 1	VA at Class 0.5
MC5T-2500/5	2500/5	60	45	30
MC5T-4000/5	4000/5	60	45	30
MC5T-6000/5	6000/5	60	45	30

Ordering Codes

As above	Change end suffix to depict required secondary. For example: MC5T-4000/5

MD5T Range



Case Size: 213mm wide x 50mm deep x 165mm high 8.3" wide x 2" deep x 6.5" high
Aperture: 160 x 50mm 6.3" x 2"
Weight: +/-1.5Kg

Part number	Ratio range	VA at Class 3	VA at Class 1	VA at Class 0.5
MD5T-2500/5	2500/5	60	45	30
MD5T-4000/5	4000/5	60	45	30
MD5T-6000/5	6000/5	60	45	30

Ordering Codes

As above	Change end suffix to depict required secondary. For example: MD5T-2500/5

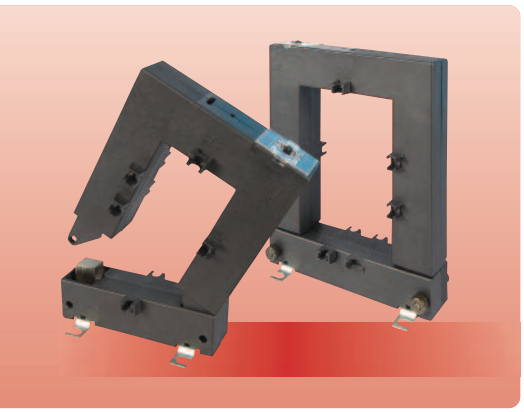
Ring Current Transformers

MR transformers accurately measure high primary currents, converting the primary current into a proportional 5 Amp secondary current.

Part number	Ratio range	VA at Class 3	VA at Class 1	VA at Class 0.5
MR-28-40/5A	40/5	1.5	-	-
MR-28-50/5A	50/5	2	-	-
MR-28-60/5A	60/5	2.5	-	-
MR-42-80/5A	80/5	1.5	-	-
MR-42-100/5A	100/5	3.75	1.25	-
MR-42-150/5A	150/5	5	2.5	1
MR-42-200/5A	200/5	7.5	5	2.5
MR-42-250/5A	250/5	10	5	2.5
MR-45-300/5A	300/5	10	7.5	3.75
MR-45-400/5A	400/5	15	7.5	5
MR-60-400/5A	400/5	15	7.5	5
MR-60-500/5A	500/5	15	10	5
MR-60-600/5A	600/5	20	10	7.5
MR-85-800/5A	800/5	20	10	7.5
MR-85-1000/5A	1000/5	30	15	10
MR-85-1200/5A	1200/5	30	15	10
MR-85-1500/5A	1500/5	30	15	10
MR-85-1600/5A	1600/5	30	15	10
MR-125-2000/5A	2000/5	30	20	15
MR-125-2500/5A	2500/5	30	20	15
MR-125-3000/5A	3000/5	30	20	15
MR-125-4000/5A	4000/5	30	20	15

Dimensions and Connections

Model type	A Inside diameter	B Outside diameter
MR-28	28	70
MR-42	42	80
MR-45	45	80
MR-60	60	100
MR-85	85	120
MR-125	125	165



Split Core Current Transformers

A range of split core current transformers that offers a cost effective and efficient method by which the current can be measured without the need to break the conductor, thereby reducing installation and commissioning time.

Accuracy Class

	Part number	Ratio	Burden VA against Class index		
			0.5	1	3
Case 1	SC1-100/5A	100/5A	-	-	1.5
	SC1-150/5A	150/5A	-	-	2
	SC1-200/5A	200/5A	-	1.5	2.5
	SC1-250/5A	250/5A	-	2	4
Case 2	SC2-250/5A	250/5A	1	2	4
	SC2-300/5A	300/5A	1.5	3	6
	SC2-400/5A	400/5A	1.5	3	10
	SC2-500/5A	500/5A	2.5	5	15
	SC2-600/5A	600/5A	2.5	5	15
	SC2-800/5A	800/5A	3	7.5	20
Case 3	SC3-600/5A	600/5A	2.5	5	15
	SC3-800/5A	800/5A	3	7.5	20
Case 4	SC4-1000/5A	1000/5A	5	10	20
	SC4-1200/5A	1200/5A	6	12.5	25
	SC4-1250/5A	1250/5A	7.5	15	30
	SC4-1600/5A	1600/5A	8	17	30
Case 5	SC5-2000/5A	2000/5A	15	20	25
	SC5-2500/5A	2500/5A	15	20	25
	SC5-3000/5A	3000/5A	20	25	30

Case size	Aperture
Case 1	20x30
Case 2	50x80
Case 3	80x80
Case 4	80x120
Case 5	80x160

AT Paladin Transducers

AC Current & Voltage, Auxiliary and Self Powered

The range provides measurement, isolation and conversion of electrical parameters into industry standard DC output signals with protection against high voltage and overload, as well as resistance to vibration in harsh electrical environments.

The AT series of Paladin transducers offer individual measurement of current and voltage in a single housing with user selectable analogue output.

Paladin AT1 Transducer

True RMS Voltage and Current, Auxiliary Powered

General Specifications

Input:	110V, 120V, 130V, 150V, 200V, 220V, 230V, 240V, 250V, 380V, 400V, 415V, 440V, & 480V AC
	1A & 5A
Output:	0/1mA, 0/5mA, 0/10mA, 0/20mA, 4/20mA & 0/10V. User selectable via dip-switches, default 4/20mA
Frequency:	50/60Hz
Auxiliary:	110-240 AC/DC
	12-48V DC

Description	Part no.
True RMS Voltage Transducer	AT1V-***-§
Where -***- = Input Voltage: 110V, 120V, 130V, 150V, 200V, 220V, 230V, 240V, 250V, 380V, 400V, 415V, 440V, or 480V AC Where -§ = Auxiliary Voltage: M = 100-240V AC/DC and L=12-48V DC Example: AT1V-120-M = Voltage transducer with 120 Volt input and 110-240V AC/DC auxiliary supply This device replaces the following Paladin Transducers: 253-TVL, 256-TVL, 256-TVS, 253-TVR, 256-TVR	
True RMS Current Transducer	AT1A-***-§
Where -*- = Input Current 1A or 5A Where -§ = Auxiliary Voltage: M = 100-240V AC/DC and L=12-48V DC Example: AT1A-CT5-L = Current transducer with 5A input and 12-48V DC auxiliary supply This device replaces the following Paladin Transducers: 253-TAL, 256-TAL, 256-TAS, 253-TAR, 256-TAR	

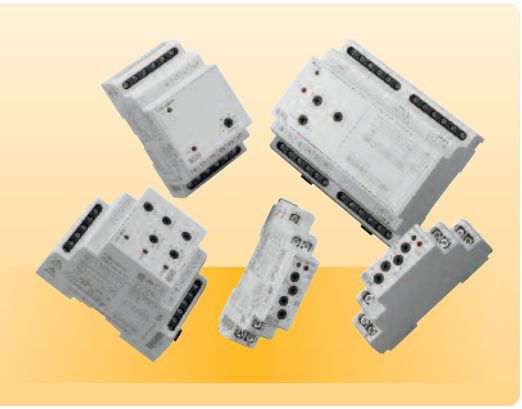
Paladin AT2 Transducer

Average Sensing Voltage & Current, Self Powered

General Specifications

Input:	110V, 120V, 130V, 150V, 200V, 220V, 230V, 240V, 250V, 380V, 400V, 415V, 440V, & 480V AC
	1A & 5A
Output:	0/1mA, 0/5mA, 0/10mA & 0/20mA. User selectable via dip-switches, default 0/20mA
Frequency:	50/60Hz

Description	Part no.
Average Sensing Voltage Transducer (self powered)	AT2V-***
Where -*** = Input Voltage: 110V, 120V, 130V, 150V, 200V, 220V, 230V, 240V, 250V, 380V, 400V, 415V, 440V, or 480V AC Example: AT2V-220 = Voltage transducer with 220 Volt input, self powered This device replaces the following Paladin Transducers: 253-TVA	
Average Sensing Current Transducer (self powered)	AT2A-***
Where -*** = Input Current 1A or 5A Example: AT2A-CT1 = Current transducer with 1A input, self powered This device replaces the following Paladin Transducers: 253-TAA	



Protector Trip Relays

Protector trip relays provide continuous monitoring and protection of any electrical parameter. DIN-rail protectors offer numerous trip functions for single and three-phase power systems, including over and under voltage, current, frequency, phase sequence/ failure or balance, reverse power, synchro-check, speed sensing and finally DC inputs.

Part number	Protection	System
AC current with adjustable time delay		
PAU-1	Under current	1-phase, 1A AC, 50/60Hz, Aux 24/240V AC/DC
PAU-5	Under current	1-phase, 5A AC, 50/60Hz, Aux 24/240V AC/DC
PAO-1	Over current	1-phase, 1A AC, 50/60Hz, Aux 24/240V AC/DC
PAO-5	Over current	1-phase, 5A AC, 50/60Hz, Aux 24/240V AC/DC
PAD-1	Under/over current (2 output relays)	1-phase, 1A AC, 50/60Hz, Aux 24/240V AC/DC
PAD-5	Under/over current (2 output relays)	1-phase, 5A AC, 50/60Hz, Aux 24/240V AC/DC
PAP/V-1	Under/over current (2 output relays)	3-phase, 3 or 4-wire, 1A AC, 50/60Hz, Aux 24/240V AC/DC
PAP/V-5	Under/over current (2 output relays)	3-phase, 3 or 4-wire, 5A AC, 50/60Hz, Aux 24/240V AC/DC
AC voltage with adjustable differential and time delay		
PVU/Z-100/120	Under voltage	1-phase, 57.7/69.3V L-N AC, 50/60Hz
PVU/Z-173/240	Under voltage	1-phase, 100/139V L-N AC, 50/60Hz
PVU/Z-380/480	Under voltage	1-phase, 220/277V L-N AC, 50/60Hz
PVO/H-100/120	Over voltage	1-phase, 57.7/69.3V L-N AC, 50/60Hz
PVO/H-173/240	Over voltage	1-phase, 100/139V L-N AC, 50/60Hz
PVO/H-380/480	Over voltage	1-phase, 220/277V L-N AC, 50/60Hz
PVB-100/120	Under/over voltage (2 output relays)	1-phase, 57.7/69.3V L-N AC, 50/60Hz
PVB-173/240	Under/over voltage (2 output relays)	1-phase, 100/139V L-N AC, 50/60Hz
PVB-380/480	Under/over voltage (2 output relays)	1-phase, 220/277V L-N AC, 50/60Hz
PVK/J-100/120	Under voltage	3-phase 3-wire, 100/120V L-L AC, 50/60Hz
PVK/J-173/240	Under voltage (2 output relays)	3-phase 3-wire, 173/240V L-L AC, 50/60Hz
PVK/J-380/480	Under voltage	3-phase 3-wire, 380/480V L-L AC, 50/60Hz
PVA/C-100/120	Over voltage	3-phase 3-wire, 100/120V L-L AC, 50/60Hz
PVA/C-173/240	Over voltage	3-phase 3-wire, 173/240V L-L AC, 50/60Hz
PVA/C-380/480	Over voltage (2 output relays)	3-phase 3-wire, 380/480V L-L AC, 50/60Hz
PVM-100/120	Under/over voltage (2 output relays)	3-phase 3-wire, 100/120V L-L AC,50/60Hz
PVM-173/240	Under/over voltage (2 output relays)	3-phase 3-wire, 173/240V L-L AC, 50/60Hz
PVM-380/480	Under/over voltage (2 output relays)	3-phase 3-wire, 380/480V L-L AC, 50/60Hz
PVV/X-100/120	Under voltage	3-phase 4-wire, 57.7/69.3V L-N (100/120V L-L) AC, 50/60Hz
PVV/X-173/240	Under voltage	3-phase 4-wire, 100/139V L-N (173/240V L-L) AC, 50/60Hz
PVV/X-380/480	Under voltage (2 output relays)	3-phase 4-wire, 220/277V L-N (380/480V L-L) AC, 50/60Hz
PVP/S-100/120	Over voltage	3-phase 4-wire, 57.7/69.3V L-N (100/120V L-L) AC, 50/60Hz
PVP/S-173/240	Over voltage	3-phase 4-wire, 100/139V L-N (173/240V L-L) AC, 50/60Hz
PVP/S-380/480	Over voltage (2 output relays)	3-phase 4-wire, 220/277V L-N (380/480V L-L) AC, 50/60Hz
PVE-100/120	Under/over voltage (2 output relays)	3-phase 4-wire, 57.7/69.3V L-N (100/120V L-L) AC, 50/60Hz
PVE 173/240	Under/over voltage (2 output relays)	3-phase 4-wire, 100/139V L-N (173/240V L-L) AC, 50/60Hz
PVE-380/480	Under/over voltage (2 output relays)	3-phase 4-wire, 220/277V L-N (380/480V L-L) AC, 50/60Hz
Frequency with adjustable differential and time delay		
PHD-100/120	Under/over frequency (2 relays)	1-phase, 57.7/69.3V L-N AC (50, 60 and 400Hz)
PHD-173/240	Under/over frequency (2 relays)	1-phase, 100/139V L-N AC (50, 60 and 400Hz)
PHD-380/480	Under/over frequency (2 relays)	1-phase, 220/277V L-N AC (50, 60 and 400Hz)
Phase sequence and phase failure		
PVR3-100/120	Phase sequence under voltage	3-phase 3-wire, 100/120V L-L AC, 50/60Hz
PVR3-173/240	Phase sequence under voltage	3-phase 3-wire, 173/240V L-L AC, 50/60Hz
PVR3-380/480	Phase sequence under voltage (2 output relays)	3-phase 3-wire, 380/480V L-L AC, 50/60Hz
PVR4-100/120	Phase sequence under voltage	3-phase 3-wire, 100/120V L-L AC, 50/60Hz

Part number	Protection	System
Phase sequence and phase failure		
PVR4-173/240	Phase sequence under voltage	3-phase 3-wire, 173/240V L-L AC, 50/60Hz
PVR4-380/480	Phase sequence under voltage (2 output relays)	3-phase 3-wire, 380/480V L-L AC, 50/60Hz
Phase balance and under relay with adjustable time delay and unbalance		
PSF/G3-100/120	Phase loss, unbalanced and under voltage	3-phase 3-wire, 100/120V L-L AC, 50/60Hz
PSF/G3-173/240	Phase loss, unbalanced and under voltage	3-phase 3-wire, 173/240V L-L AC, 50/60Hz
PSF/G3-380/480	Phase loss, unbalanced and under voltage	3-phase 3-wire, 380/480V L-L AC, 50/60Hz
PSF/G4-100/120	Phase loss, unbalanced and under voltage	3-phase 4-wire, 57.7/69.3V L-N (100/120V L-L) AC, 50/60Hz
PSF/G4-173/240	Phase loss, unbalanced and under voltage	3-phase 4-wire, 100/139V L-N (173/240V L-L) AC, 50/60Hz
PSF/G4-380/480	Phase loss, unbalanced and under voltage	3-phase 4-wire, 220/277V L-N (380/480V L-L) AC, 50/60Hz
Reverse power (current) with adjustable time delay		
PAS-100/120	Reverse power	Single or 3-phase, 4-wire, 57.7/69.3V L-N (100/120V L-L) AC, 0-6A AC, 50/60Hz
PAS-173/240	Reverse power	Single or 3-phase, 4-wire, 100/139V L-N (173/240V L-L) AC, 0-6A AC, 50/60Hz
PAS-380/480	Reverse power	Single or 3-phase, 4-wire, 220/277V L-N (380/480V L-L) AC, 0-6A AC, 50/60Hz
PAT-100/120	Reverse power	3-phase, 3-wire, 100-120V AC, 0-6A AC, 50/60Hz
PAT-173/240	Reverse power	3-phase, 3-wire, 173-240V AC, 0-6A AC, 50/60Hz
PAT-380/480	Reverse power	3-phase, 3-wire, 380-480V AC, 0-6A AC, 50/60Hz
Syncro-check with dead bus facility		
PLL/D-100/120	Phase angle and voltage dead bus	Single or 3-phase, 4-wire, 57.7/69.3V L-N AC, 50/60Hz
PLL/D-173/240	Phase angle and voltage dead bus	Single or 3-phase, 4-wire, 100/139V L-N AC, 50/60Hz
PLL/D-380/480	Phase angle and voltage dead bus	Single or 3-phase, 4-wire, 220/277V L-N AC, 50/60Hz
Thermistor trip with over trip relay and manual/remote reset		
PMM/T-24/240	Over temperature	Input PTC thermistors, 24/240V AC/DC Aux
DC Millivolts with adjustable time delay		
PBT/S-24/240	High/low trip (2 output relays)	50, 75, 100mV DC, 24/240V AC/DC Aux
PBT/S-12/24	High/low trip (2 output relays)	50, 75, 100mV DC, 12/24V DC Aux
DC Milliamps with adjustable time delay		
PBV-24/240	High/low trip (2 output relays)	0/1, 0/10, 0/20, 4/20mA DC, 24/240V, AC/DC Aux
PBV-12/24	High/low trip (2 output relays)	0/1, 0/10, 0/20, 4/20mA DC, 12/24V, DC Aux
Speed sensing		
PH3-12/24	3 Setpoints, 1 relay	Input Magnetic pickup, 12/24V DC Aux

Earth Leakage Relay – Standard (DPCO)

Description	Cat. no.
24-48 volts AC and DC	373-ELRW-CBC5-A2-ST
100-250 volts AC and DC	373-ELRW-CBC5-A3-ST

Earth Leakage Relays – Core Balanced Current Transformers

Description	Cat. no.
Aperture diameter 35mm	CBT-94F-035
Aperture diameter 70mm	CBT-94F-070
Aperture diameter 105mm	CBT-94F-105

Analogue Instruments

The range offers DIN instruments, ANSI switchboard meters, panel indicators, sealed and ruggedised instruments and complementary selector switches for line-to-line and line-to neutral readings. Instruments are precision engineered and robust in design, ensuring accurate measurement and display in the most demanding of environments.

DIN48 - AC Ammeters 90°

Moving Iron Shortscale AC Ammeters CT Operated

Description	Cat. no.
5A CT operated, scaled 0-60A, 50/60Hz	E242-75A-G-LS-NW-C7
5A CT operated, scaled 0-100A, 50/60Hz	E242-75A-G-LS-PK-C7
5A CT operated, scaled 0-150A, 50/60Hz	E242-75A-G-LS-PZ-C7
5A CT operated, scaled 0-200A, 50/60Hz	E242-75A-G-LS-RL-C7
5A CT operated, scaled 0-250A, 50/60Hz	E242-75A-G-LS-RS-C7
5A CT operated, scaled 0-300A, 50/60Hz	E242-75A-G-LS-RX-C7
5A CT operated, scaled 0-400A, 50/60Hz	E242-75A-G-LS-SC-C7
5A CT operated, scaled 0-600A, 50/60Hz	E242-75A-G-LS-SJ-C7
5A CT operated, scaled 0-800A, 50/60Hz	E242-75A-G-LS-SN-C7

Moving Iron Shortscale AC Ammeters x 6 Overload CT Operated

Description	Cat. no.
5A CT operated, scaled 0-60/360A, 50/60Hz	E242-756A-G-LS-NW-C7
5A CT operated, scaled 0-100/600A, 50/60Hz	E242-756A-G-LS-PK-C7
5A CT operated, scaled 0-150/900A, 50/60Hz	E242-756A-G-LS-PZ-C7
5A CT operated, scaled 0-200/1200A, 50/60Hz	E242-756A-G-LS-RL-C7
5A CT operated, scaled 0-250/1500A, 50/60Hz	E242-756A-G-LS-RS-C7
5A CT operated, scaled 0-300/1800A, 50/60Hz	E242-756A-G-LS-RX-C7
5A CT operated, scaled 0-400/2400A, 50/60Hz	E242-756A-G-LS-SC-C7
5A CT operated, scaled 0-600/3600A, 50/60Hz	E242-756A-G-LS-SJ-C7
5A CT operated, scaled 0-800/4800A, 50/60Hz	E242-756A-G-LS-SN-C7

Moving Iron Shortscale AC Ammeters Direct Connected

Description	Cat. no.
10A direct connected, scaled 0-10A, 50/60Hz	E242-75A-G-MT-MT-C7
15A direct connected, scaled 0-15A, 50/60Hz	E242-75A-G-ND-ND-C7
20A direct connected, scaled 0-20A, 50/60Hz	E242-75A-G-NG-NG-C7
25A direct connected, scaled 0-25A, 50/60Hz	E242-75A-G-NJ-NJ-C7
40A direct connected, scaled 0-40A, 50/60Hz	E242-75A-G-NP-NP-C7

Moving Iron Shortscale AC Ammeters x 6 Overload Direct Connected

Description	Cat. no.
10A direct connected, scaled 0-10/60A, 50/60Hz	E242-756A-G-MT-MT-C7
15A direct connected, scaled 0-15/90A, 50/60Hz	E242-756A-G-ND-ND-C7
20A direct connected, scaled 0-20/120A, 50/60Hz	E242-756A-G-NG-NG-C7
25A direct connected, scaled 0-25/150A, 50/60Hz	E242-756A-G-NJ-NJ-C7
40A direct connected, scaled 0-40/240A, 50/60Hz	E242-756A-G-NP-NP-C7

DIN48 - AC Voltmeters 90°

Description	Cat. no.
0-150V direct connected, scaled 0-150V, 50/60Hz	E242-75V-G-PZ-PZ-C7
0-300V direct connected, scaled 0-300V, 50/60Hz	E242-75V-G-RX-RX-C7
0-500V direct connected, scaled 0-500V, 50/60Hz	E242-75V-G-SF-SF-C7
0-600V direct connected, scaled 0-600V, 50/60Hz	E242-75V-G-SJ-SJ-C7

DIN48 - Frequency Meters 90°

Description	Cat. no.
45-65Hz 100-125V, scaled 45/55/65Hz	E242-41S-G-PL-AJ-AJ
45-65Hz 200-250V, scaled 45/55/65Hz	E242-41S-G-RN-AJ-AJ

DIN48 - DC Ammeters Shunt Operated

Description	Cat. no.
75mV shunt operated, scaled 0-10A	E242-89A-G-EJ-MT
75mV shunt operated, scaled 0-20A	E242-89A-G-EJ-NG
75mV shunt operated, scaled 0-25A	E242-89A-G-EJ-NJ
75mV shunt operated, scaled 0-40A	E242-89A-G-EJ-NP
75mV shunt operated, scaled 0-60A	E242-89A-G-EJ-NW
75mV shunt operated, scaled 0-80A	E242-89A-G-EJ-PD
75mV shunt operated, scaled 0-100A	E242-89A-G-EJ-PK
75mV shunt operated, scaled 0-150A	E242-89A-G-EJ-PZ
75mV shunt operated, scaled 0-200A	E242-89A-G-EJ-RL
75mV shunt operated, scaled 0-250A	E242-89A-G-EJ-RS
75mV shunt operated, scaled 0-400A	E242-89A-G-EJ-SC
75mV shunt operated, scaled 0-600A	E242-89A-G-EJ-SJ
75mV shunt operated, scaled 0-1000A	E242-89A-G-EJ-SS
75mV shunt operated, scaled 0-1500A	E242-89A-G-EJ-TC

DIN48 - DC Indicators Standard Scale as Required

Description	Cat. no.
1mA DC indicator	E242-89A-G-FA-**
10mA DC indicator	E242-89A-G-GZ-**
20mA DC indicator	E242-89A-G-HF-**
4-20mA DC indicator	E242-89R-G-HG-**

DIN48 - DC Voltmeters

Description	Cat. no.
0-10V DC voltmeter - standard scale as required	E242-89V-G-MT-**
0-15V direct connected, scaled 0-15V	E242-89V-G-ND-ND
0-30V direct connected, scaled 0-30V	E242-89V-G-NL-NL

DIN72 - AC Ammeters 90°

Moving Iron Shortscale AC Ammeters CT Operated

Description	Cat. no.
5A CT operated, scaled 0-60A, 50/60Hz	E243-02A-G-LS-NW-C7
5A CT operated, scaled 0-100A, 50/60Hz	E243-02A-G-LS-PK-C7
5A CT operated, scaled 0-150A, 50/60Hz	E243-02A-G-LS-PZ-C7
5A CT operated, scaled 0-200A, 50/60Hz	E243-02A-G-LS-RL-C7
5A CT operated, scaled 0-250A, 50/60Hz	E243-02A-G-LS-RS-C7
5A CT operated, scaled 0-300A, 50/60Hz	E243-02A-G-LS-RX-C7
5A CT operated, scaled 0-400A, 50/60Hz	E243-02A-G-LS-SC-C7
5A CT operated, scaled 0-600A, 50/60Hz	E243-02A-G-LS-SJ-C7
5A CT operated, scaled 0-800A, 50/60Hz	E243-02A-G-LS-SN-C7

Moving Iron Shortscale AC Ammeters x 6 Overload CT Operated

Description	Cat. no.
5A CT operated, scaled 0-60/360A, 50/60Hz	E243-026A-G-LS-NW-C7
5A CT operated, scaled 0-100/600A, 50/60Hz	E243-026A-G-LS-PK-C7
5A CT operated, scaled 0-150/900A, 50/60Hz	E243-026A-G-LS-PZ-C7
5A CT operated, scaled 0-200/1200A, 50/60Hz	E243-026A-G-LS-RL-C7
5A CT operated, scaled 0-250/1500A, 50/60Hz	E243-026A-G-LS-RS-C7
5A CT operated, scaled 0-300/1800A, 50/60Hz	E243-026A-G-LS-RX-C7
5A CT operated, scaled 0-400/2400A, 50/60Hz	E243-026A-G-LS-SC-C7
5A CT operated, scaled 0-600/3600A, 50/60Hz	E243-026A-G-LS-SJ-C7
5A CT operated, scaled 0-800/4800A, 50/60Hz	E243-026A-G-LS-SN-C7

Moving Iron Shortscale AC Ammeters Direct Connected

Description	Cat. no.
10A direct connected, scaled 0-10A, 50/60Hz	E243-02A-G-MT-MT-C7
15A direct connected, scaled 0-15A, 50/60Hz	E243-02A-G-ND-ND-C7
20A direct connected, scaled 0-20A, 50/60Hz	E243-02A-G-NG-NG-C7
25A direct connected, scaled 0-25A, 50/60Hz	E243-02A-G-NJ-NJ-C7
40A direct connected, scaled 0-40A, 50/60Hz	E243-02A-G-NP-NP-C7

Moving Iron Shortscale AC Ammeters x 6 Overload Direct Connected

Description	Cat. no.
10A direct connected, scaled 0-10/60A, 50/60Hz	E243-026A-G-MT-MT-C7
15A direct connected, scaled 0-15/90A, 50/60Hz	E243-026A-G-ND-ND-C7
20A direct connected, scaled 0-20/120A, 50/60Hz	E243-026A-G-NG-NG-C7
25A direct connected, scaled 0-25/150A, 50/60Hz	E243-026A-G-NJ-NJ-C7
40A direct connected, scaled 0-40/240A, 50/60Hz	E243-026A-G-NP-NP-C7

DIN72 - AC Voltmeters 90°

Description	Cat. no.
0-150V direct connected, scaled 0-150V. 50/60Hz	E243-02V-G-PZ-PZ-C7
0-300V direct connected, scaled 0-300V. 50/60Hz	E243-02V-G-RX-RX-C7
0-500V direct connected, scaled 0-500V. 50/60Hz	E243-02V-G-SF-SF-C7
0-600V direct connected, scaled 0-600V. 50/60Hz	E243-02V-G-SJ-SJ-C7

DIN72 - Frequency Meters 90°

Description	Cat. no.
45-65Hz 100-125V, scaled 45/55/65Hz	E243-41S-G-PL-AJ-AJ
45-65Hz 200-250V, scaled 45/55/65Hz	E243-41S-G-RN-AJ-AJ

DIN72 DC Ammeters Connect via Shunt X/75mV with Fitted Dial Plate – Normal Scaling

Description	Cat. no.
75mV shunt operated, scaled 0-10A	E243-01A-G-EJ-MT
75mV shunt operated, scaled 0-20A	E243-01A-G-EJ-NG
75mV shunt operated, scaled 0-25A	E243-01A-G-EJ-NJ
75mV shunt operated, scaled 0-40A	E243-01A-G-EJ-NP
75mV shunt operated, scaled 0-60A	E243-01A-G-EJ-NW
75mV shunt operated, scaled 0-80A	E243-01A-G-EJ-PD
75mV shunt operated, scaled 0-100A	E243-01A-G-EJ-PK
75mV shunt operated, scaled 0-150A	E243-01A-G-EJ-PZ
75mV shunt operated, scaled 0-200A	E243-01A-G-EJ-RL
75mV shunt operated, scaled 0-250A	E243-01A-G-EJ-RS
75mV shunt operated, scaled 0-400A	E243-01A-G-EJ-SC
75mV shunt operated, scaled 0-600A	E243-01A-G-EJ-SJ
75mV shunt operated, scaled 0-1000A	E243-01A-G-EJ-SS
75mV shunt operated, scaled 0-1500A	E243-01A-G-EJ-TC

DIN72 - DC Indicators

Description	Cat. no.
1mA DC indicator	E243-01A-G-FA-**
10mA DC indicator	E243-01A-G-GZ-**
20mA DC indicator	E243-01A-G-HF-**
4-20mA DC indicator	E243-01R-G-HG-**

DIN72 - DC Voltmeters

Description	Cat. no.
0-10V DC voltmeter - standard scale as required	E243-01V-G-MT-**
0-15V direct connected, scaled 0-15V	E243-01V-G-ND-ND
0-30V direct connected, scaled 0-30V	E243-01V-G-NL-NL

DIN96 - AC Ammeters 90°

AC Ammeters Connect via CT X/5A with Fixed Dial Plate Normal Scaling

Description	Cat. no.
5A CT operated, scaled 0-60A, 50/60Hz	E244-02A-G-LS-NW-C7
5A CT operated, scaled 0-100A, 50/60Hz	E244-02A-G-LS-PK-C7
5A CT operated, scaled 0-150A, 50/60Hz	E244-02A-G-LS-PZ-C7
5A CT operated, scaled 0-200A, 50/60Hz	E244-02A-G-LS-RL-C7
5A CT operated, scaled 0-250A, 50/60Hz	E244-02A-G-LS-RS-C7
5A CT operated, scaled 0-300A, 50/60Hz	E244-02A-G-LS-RX-C7
5A CT operated, scaled 0-400A, 50/60Hz	E244-02A-G-LS-SC-C7
5A CT operated, scaled 0-600A, 50/60Hz	E244-02A-G-LS-SJ-C7
5A CT operated, scaled 0-800A, 50/60Hz	E244-02A-G-LS-SN-C7

Moving Iron Shortscale AC Ammeters x 6 Overload CT Operated

Description	Cat. no.
5A CT operated, scaled 0-60/360A, 50/60Hz	E244-026A-G-LS-NW-C7
5A CT operated, scaled 0-100/600A, 50/60Hz	E244-026A-G-LS-PK-C7
5A CT operated, scaled 0-150/900A, 50/60Hz	E244-026A-G-LS-PZ-C7
5A CT operated, scaled 0-200/1200A, 50/60Hz	E244-026A-G-LS-RL-C7
5A CT operated, scaled 0-250/1500A, 50/60Hz	E244-026A-G-LS-RS-C7
5A CT operated, scaled 0-300/1800A, 50/60Hz	E244-026A-G-LS-RX-C7
5A CT operated, scaled 0-400/2400A, 50/60Hz	E244-026A-G-LS-SC-C7
5A CT operated, scaled 0-600/3600A, 50/60Hz	E244-026A-G-LS-SJ-C7
5A CT operated, scaled 0-800/4800A, 50/60Hz	E244-026A-G-LS-SN-C7

Moving Iron Shortscale AC Ammeters Direct Connected

Description	Cat. no.
10A direct connected, scaled 0-10A, 50/60Hz	E244-02A-G-MT-MT-C7
15A direct connected, scaled 0-15A, 50/60Hz	E244-02A-G-ND-ND-C7
20A direct connected, scaled 0-20A, 50/60Hz	E244-02A-G-NG-NG-C7
25A direct connected, scaled 0-25A, 50/60Hz	E244-02A-G-NJ-NJ-C7
40A direct connected, scaled 0-40A, 50/60Hz	E244-02A-G-NP-NP-C7

Moving Iron Shortscale AC Ammeters x 6 Overload Direct Connected

Description	Cat. no.
10A direct connected, scaled 0-10/60A, 50/60Hz	E244-026A-G-MT-MT-C7
15A direct connected, scaled 0-15/90A, 50/60Hz	E244-026A-G-ND-ND-C7
20A direct connected, scaled 0-20/120A, 50/60Hz	E244-026A-G-NG-NG-C7
25A direct connected, scaled 0-25/150A, 50/60Hz	E244-026A-G-NJ-NJ-C7
40A direct connected, scaled 0-40/240A, 50/60Hz	E244-026A-G-NP-NP-C7

DIN96 - AC Voltmeters 90°

Description	Cat. no.
0-150V direct connected, scaled 0-150V. 50/60Hz	E244-02V-G-PZ-PZ-C7
0-300V direct connected, scaled 0-300V. 50/60Hz	E244-02V-G-RX-RX-C7
0-500V direct connected, scaled 0-500V. 50/60Hz	E244-02V-G-SF-SF-C7
0-600V direct connected, scaled 0-600V. 50/60Hz	E244-02V-G-SJ-SJ-C7

DIN96 - Frequency Meters 90°

Description	Cat. no.
45-65Hz 100-125V, scaled 45/55/65Hz	E244-41S-G-PL-AJ-AJ
45-65Hz 200-250V, scaled 45/55/65Hz	E244-41S-G-RN-AJ-AJ

DIN96 - DC Ammeters Connect via Shunt X/75mV with Fitted Dial Plate – Normal Scaling

Description	Cat. no.
75mV shunt operated, scaled 0-10A	E244-01A-G-EJ-MT
75mV shunt operated, scaled 0-20A	E244-01A-G-EJ-NG
75mV shunt operated, scaled 0-25A	E244-01A-G-EJ-NJ
75mV shunt operated, scaled 0-40A	E244-01A-G-EJ-NP
75mV shunt operated, scaled 0-60A	E244-01A-G-EJ-NW
75mV shunt operated, scaled 0-80A	E244-01A-G-EJ-PD
75mV shunt operated, scaled 0-100A	E244-01A-G-EJ-PK
75mV shunt operated, scaled 0-150A	E244-01A-G-EJ-PZ
75mV shunt operated, scaled 0-200A	E244-01A-G-EJ-RL
75mV shunt operated, scaled 0-250A	E244-01A-G-EJ-RS
75mV shunt operated, scaled 0-400A	E244-01A-G-EJ-SC
75mV shunt operated, scaled 0-600A	E244-01A-G-EJ-SJ
75mV shunt operated, scaled 0-1000A	E244-01A-G-EJ-SS
75mV shunt operated, scaled 0-1500A	E244-01A-G-EJ-TC

DIN96 - DC Indicators

Description	Cat. no.
1mA DC indicator	E244-01A-G-FA-**
10mA DC indicator	E244-01A-G-GZ-**
20mA DC indicator	E244-01A-G-HF-**
4-20mA DC indicator	E244-01R-G-HG-**

DIN96 - DC Voltmeters

Description	Cat. no.
0-10V DC voltmeter - standard scale as required	E244-01V-G-MT-**
0-15V direct connected, scaled 0-15V	E244-01V-G-ND-ND
0-30V direct connected, scaled 0-30V	E244-01V-G-NL-NL

Hours Run Meters

Elapsed time meters (ETM) or hours run meters monitor ON/RUN time allowing the user to effectively control production efficiency, cost estimation and service period monitoring for preventative maintenance. Time is measured in increments of 0.01h up to 99999.99 hours after which the meter automatically resets to zero. Meters are non resettable before this time to prevent accidental resetting.

Specifications

AC	
Display	99999.99
Voltage	100-125V AC
	200-250V AC
	380-440V AC
Frequency	50 or 60Hz
Operating temperature	-25C to +80C
Burden	1VA (100-25V AC)
	2VA (200-250V AC)
	3.5VA (380-440V AC)

DC	
Display	99999.99
Voltage	12-30V DC
	10-80V DC
	110V DC
Operating temperature	-20C to +70C
Burden	0.5VA (6-30V DC)
	1VA (10-80V DC)
	1.5VA (110V DC)

DIN48 - AC Hours Run Meter

Description	Cat. no.
100-125V AC 50Hz	M242-155-G-PL-ZH-C5
200-250V AC 50Hz	M242-155-G-RN-ZH-C5
380-440V AC 50Hz	M242-155-G-RY-ZH-C5
6-30V DC	M242-157-G-BU-ZH-DC
10-80V DC	M242-157-G-NR-ZH-DC
110V DC	M242-157-G-PM-ZH-DC

DIN72 - AC Hours Run Meter

Description	Cat. no.
100-125V AC 50Hz	M243-155-G-PL-ZH-C5
200-250V AC 50Hz	M243-155-G-RN-ZH-C5
380-440V AC 50Hz	M243-155-G-RY-ZH-C5
6-30V DC	M243-157-G-BU-ZH-DC
10-80V DC	M243-157-G-NR-ZH-DC
110V DC	M243-157-G-PM-ZH-DC

DIN96 - AC Hours Run Meter

Description	Cat. no.
100-125V AC 50Hz	M244-155-G-PL-ZH-C5
200-250V AC 50Hz	M244-155-G-RN-ZH-C5
380-440V AC 50Hz	M244-155-G-RY-ZH-C5
6-30V DC	M244-157-G-BU-ZH-DC
10-80V DC	M244-157-G-NR-ZH-DC
110V DC	M244-157-G-PM-ZH-DC

DIN Panel Meter with Selector Switch

Product Codes – AC Ammeters with Selector Switch

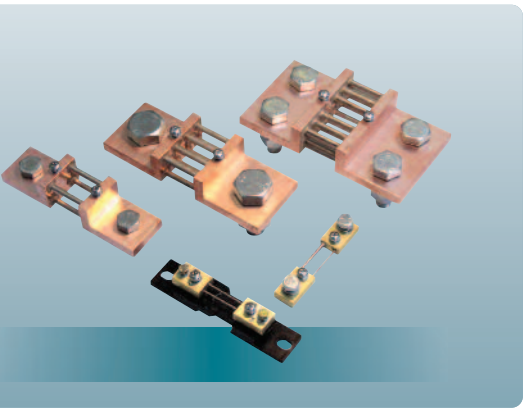
Code	Case size	Full scale deflection	Switch notation
E243-02E-G-LS**-C7-AMP3	72mm	0/5A AC	OFF L1 L2 L3
E244-02E-G-LS**-C7-AMP3	96mm	0/5A AC	OFF L1 L2 L3

**Insert application CT primary value.

Product Codes – AC Voltmeters with Selector Switch

Code	Case size	Full scale deflection	Switch notation	3-phase
E243-02Q-G-SF-SF-C7-SW3	72mm	0/500V AC	L1L3 L1L2 L2L3 L3N L2N L1N	4W
E244-02Q-G-SF-SF-C7-SW3	96mm	0/500V AC	L1L3 L1L2 L2L3 L3N L2N L1N	4W

**Insert application scale, e.g. 15kV/110V VT, VT primary and secondary value.



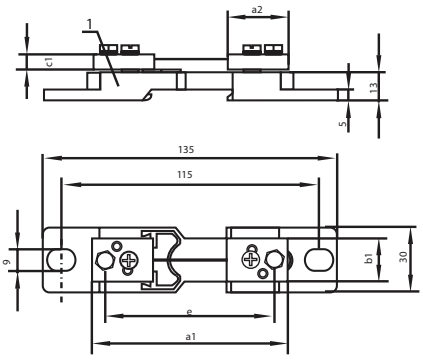
Shunts

Series ST

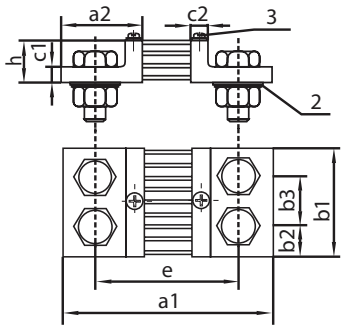
Ratio per drawings	Version as	Cat. no.
10A-75mV Class 0.5	A	ST1-10A/75MV
20A-75mV Class 0.5	A	ST1-20A/75MV
25A-75mV Class 0.5	A	ST1-25A/75MV
40A-75mV Class 0.5	A	ST1-40A/75MV
60A-75mV Class 0.5	A	ST1-60A/75MV
80A-75mV Class 0.5	A	ST1-80A/75MV
100A-75mV Class 0.5	A	ST1-100A/75MV
150A-75mV Class 0.5	A	ST1-150A/75MV
200A-75mV Class 0.5	B	ST1-200A/75MV
250A-75mV Class 0.5	B	ST2-250A/75MV
400A-75mV Class 0.5	B	ST2-400A/75MV
600A-75mV Class 0.5	B	ST2-600A/75MV
1000A-75mV Class 0.5	B	ST2-1000A/75MV
1500A-75mV Class 0.5	B	ST2-1500A/75MV

Dimensions

Version A



Version B



Dimensions								
a1	a2	b1	b2	b3	c1	c2	e	h
90	28	20	-	-	8	-	78	-
90	28	20	-	-	8	-	78	-
90	28	20	-	-	8	-	78	-
115	33	25	-	-	8	-	95	-
115	33	25	-	-	8	-	95	-
115	33	25	-	-	8	-	95	-
115	33	25	-	-	8	-	95	-
115	33	25	-	-	8	-	95	-
160	55	30	15	-	10	10	120	30
160	55	30	15	-	10	10	120	30
160	55	40	20	-	10	10	120	30
160	55	40	20	-	10	10	120	30
180	65	60	30	-	10	10	130	30
180	65	120	30	60	10	-	130	30

1 - Insulating base
2 - Spring washer
3 - Screw with cruciform cavity

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