Crompton TECHNOLOGY



EBONY EXCEL SC RANGE CURRENT TRANSFORMERS

TE'S CROMPTON INSTRUMENTS

Crompton Technology Inc,7538 Bath Rd, Mississauga, ON, L4T 1L2, T:905-671-2304, F:905-671-3661, info@cromptoncanada.com, www.cromptoncanada.com





FEATURES

- CT ratios from 100A to 5000A with 5A and 1A secondary's
- Comprehensive range of class accuracy's
- Flame retardant UL94V-0 polycarbonate moulded case
- Wide range of system current ratings
- Wall or busbar and mounting
- Hinged terminal covers
- Laser etched rating plates
- Quick release button to open core
- Key lock to secure core

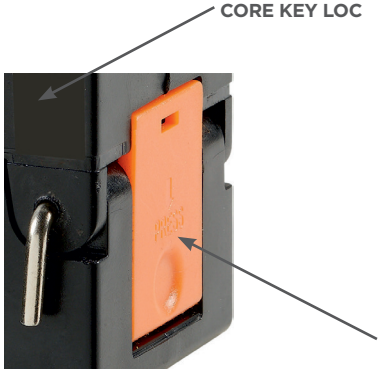
BENEFITS

- Wide range of apertures and case sizes
- Reduction of high currents for ease of metering
- Long product life

APPROVALS

- IEC 61869-2
- BS3938
- UL Recognised File No. E257877

cRUus E257877



EBONY EXCEL SC RANGE

TE's Crompton Instruments **Ebony Excel SC** range of Current Transformers offer wide system current ratings, apertures, busbar and case sizes to suit every application. The split core provides an efficient method by which the current can be measured without the need to break the conductor.

Manufactured to meet IEC61869-2, the range benefits include ratio rating from 100/5 to 5000/5, with performance class accuracies of class 3, 1 & 0.5. The range features hinged wire sealable terminal covers for safety and multiple mounting options. Additional features include quick push button for core opening and key lock safety feature to secure the CT core preventing accidental opening after installation.

CONSTRUCTION

The split core and secondary windings are encapsulated with UL94V-0 approved polycarbonate, in a moulded case providing excellent mechanical strength and electrical insulation

INSTALLATION OPTIONS

- Plug-in metal feet for wall or base mounting
- Moulded busbar mounting
- Primary copper busbar mounting
- Multi busbar mounting for two busbars
- Plastic DIN-rail adaptor for DIN-rail mounting (available as an option)

SPECIFICATION

Applicable Standards	IEC-61869-1&2 / IEC- 60044 -1, BS 3938, IS 2705 -1,2&3.
Case	Unfilled polycarbonate, flame retardant grades classified UL 94V-0
Connection	Two connection on each side. M4 screws with self lifting clamp strap assembly
Insulation Class	E (120°C Maximum)
System Voltage	720V maximum
Test Voltage	4KV 50Hz for 1 min
Operating Frequency	50Hz or 60Hz
Rated secondary output	5A standard (1A on request)
Rated burden	1, 1.25, 1.5, 2.5, 3.75, 5, 7.5, 10, 12.5, 15, 20, 30, 45, 60, 100VA
Class of accuracy	0.5 for accurate measuring, kWh 1 for general measurement 3 for indicating instruments
Ambient temperature	-25°C to +40°C
Storage temperature	-50°C...+80°C
Thermal short circuit current (Ith)	60 x In
Dynamic short circuit current (Idyn)	2.5 x Ith
Instrument security factor	10, 15, 30
Rated continuous thermal current	1,2 x in
Degree of protection	IP20

ACCURACY CLASSES

The **Ebony Excel SC** range includes a comprehensive range of class accuracys between 3, 1, & 0.5.



XLSC1 RANGE Window 0.90 x 1.30 inches

Case size: 3.66" wide x 1.57" deep x 4.17" high (93 x 40 x 106mm)

Primary Rating: 100-400A

Secondary Rating: 5A. 1A Ratio's available change part number to end in 1A e.g. XLSC1-100/1A

XLSC1 RANGE		ACCURACY			SECURITY FACTOR (ISF)		
Model Type	Primary Current	Class 3	Class 1	Class 0.5	Class 3	Class 1	Class 0.5
XLSC1-100/5A	100A	3.5VA	1.5VA	-	FS10	FS10	-
XLSC1-150/5A	150A	3.75VA	1.75VA	-	FS10	FS10	-
XLSC1-200/5A	200A	5VA	2.5VA	-	FS10	FS10	-
XLSC1-250/5A	250A	6.25VA	3.75VA	-	FS10	FS10	-
XLSC1-300/5A	300A	6.25VA	5VA	2.5VA	FS10	FS10	FS10
XLSC1-400/5A	400A	10VA	6.25VA	3.75VA	FS10	FS10	FS10



XLSC2 RANGE Window 1.69 x 2.16 inches

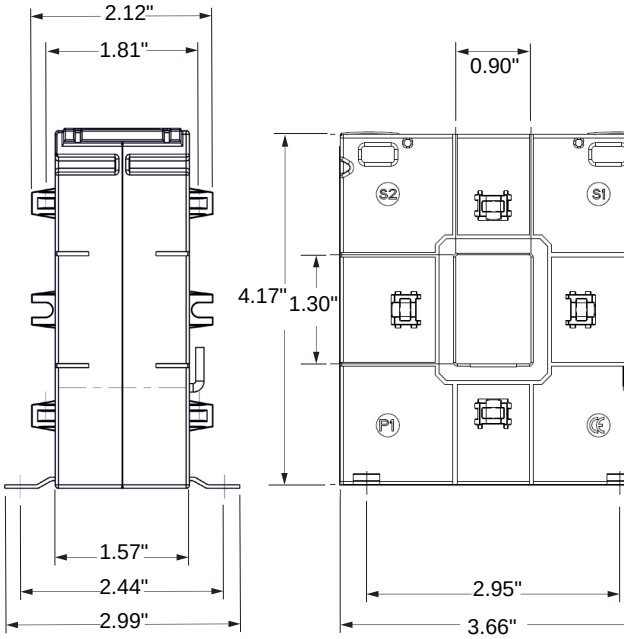
Case size: 4.25" wide x 1.96" deep x 4.92" high (108 x 50 x 125 mm)

Primary Rating: 100-800A

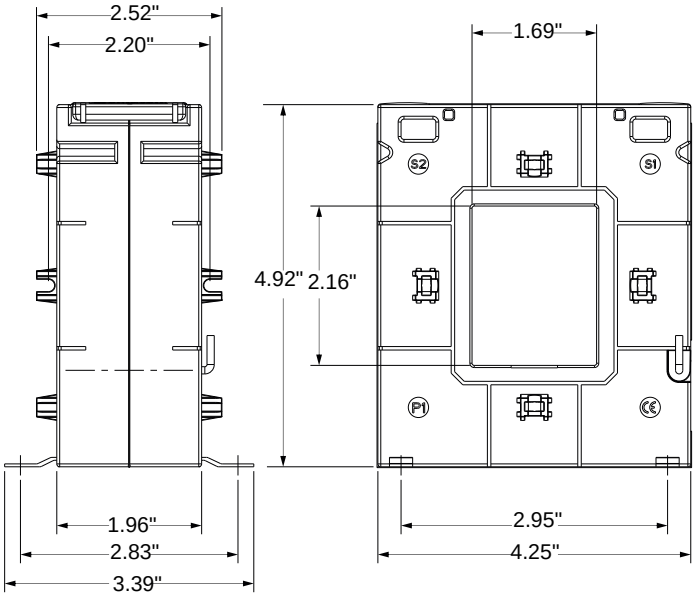
Secondary Rating: 5A. 1A Ratio's available change part number to end in 1A e.g. XLSC2-100/1A

XLSC2 RANGE		ACCURACY			SECURITY FACTOR (ISF)		
Model Type	Primary Current	Class 3	Class 1	Class 0.5	Class 3	Class 1	Class 0.5
XLSC2-100/5A	100A	2.5VA	1.5VA	-	FS15	FS15	-
XLSC2-125/5A	125A	2.5VA	1.5VA	-	FS15	FS15	-
XLSC2-150/5A	150A	3.75VA	1.75VA	-	FS15	FS15	-
XLSC2-200/5A	200A	5VA	3.75VA	1.5VA	FS15	FS15	FS15
XLSC2-250/5A	250A	7.5VA	5VA	2.5VA	FS15	FS15	FS15
XLSC2-300/5A	300A	7.5VA	5VA	2.5VA	FS15	FS15	FS15
XLSC2-400/5A	400A	10VA	7.5VA	5VA	FS15	FS15	FS15
XLSC2-500/5A	500A	10VA	7.5VA	5VA	FS15	FS15	FS15
XLSC2-600/5A	600A	12.5VA	10VA	6.25VA	FS15	FS15	FS15
XLSC2-750/5A	750A	15VA	12.5VA	7.5VA	FS15	FS15	FS15
XLSC2-800/5A	800A	15VA	12.5VA	7.5VA	FS15	FS15	FS15

XLSC1



XLSC2





XLSC3 RANGE Window 2.16 x 3.35 inches

Case size: 4.92" wide x 1.57" deep x 6.22" high (125 x 40 x 158 mm)

Primary Rating: 250-2000A

Secondary Rating: 5A. 1A Ratio's available change part number to end in 1A e.g. XLSC3-250/1A

XLSC3 RANGE		ACCURACY			SECURITY FACTOR (ISF)		
Model Type	Primary Current	Class 3	Class 1	Class 0.5	Class 3	Class 1	Class 0.5
XLSC3-250/5A	250A	3.75VA	2.5VA	1VA	FS10	FS10	FS10
XLSC3-300/5A	300A	5VA	3.75VA	2.5VA	FS10	FS10	FS10
XLSC3-400/5A	400A	5VA	3.75VA	2.5VA	FS10	FS10	FS10
XLSC3-500/5A	500A	7.5VA	5VA	3.75VA	FS10	FS10	FS10
XLSC3-600/5A	600A	10VA	7.5VA	5VA	FS10	FS10	FS10
XLSC3-750/5A	750A	12.5VA	10VA	7.5VA	FS10	FS10	FS10
XLSC3-800/5A	800A	12.5VA	10VA	7.5VA	FS10	FS10	FS10
XLSC3-1000/5A	1000A	20VA	15VA	10VA	FS10	FS10	FS10
XLSC3-1200/5A	1200A	20VA	15VA	10VA	FS10	FS10	FS10
XLSC3-1250/5A	1250A	10VA	15VA	10VA	FS10	FS10	FS10
XLSC3-1500/5A	1500A	20VA	15VA	10VA	FS10	FS10	FS10
XLSC3-1600/5A	1600A	20VA	15VA	10VA	FS10	FS10	FS10
XLSC3-2000/5A	2000A	20VA	15VA	10VA	FS10	FS10	FS10



XLSC4 RANGE Window 3.35 x 4.92 inches

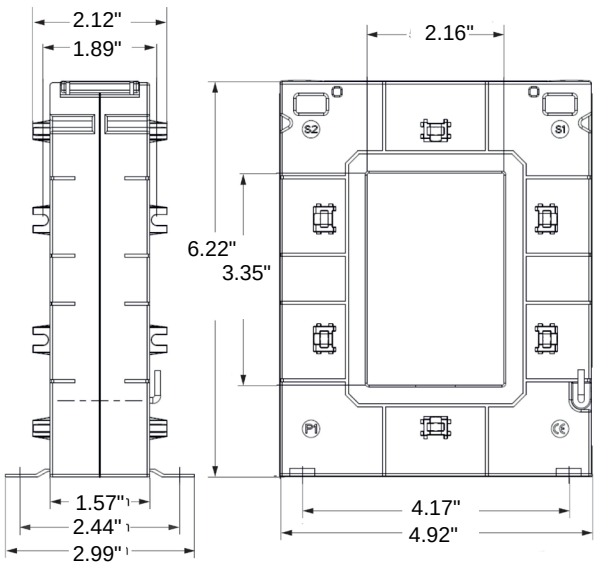
Case size: 6.10" wide x 1.57" deep x 7.79" high (155 x 40 x 198 mm)

Primary Rating: 250-3000A

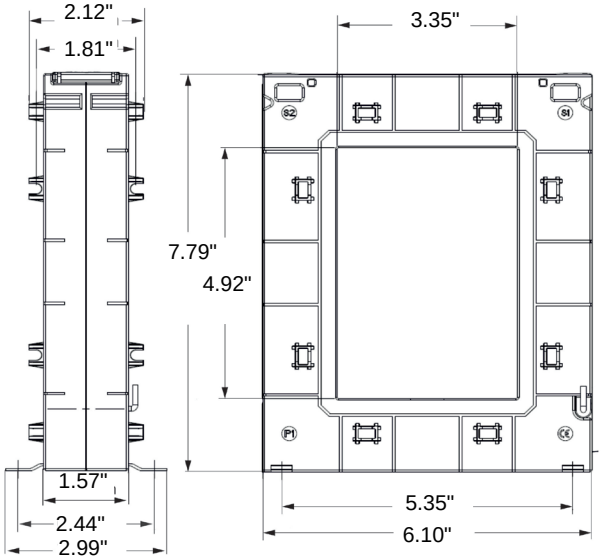
Secondary Rating: 5A. 1A Ratio's available change part number to end in 1A e.g. XLSC4-250/1A

XLSC4 RANGE		ACCURACY			SECURITY FACTOR (ISF)		
Model Type	Primary Current	Class 3	Class 1	Class 0.5	Class 3	Class 1	Class 0.5
XLSC4-250/5A	250A	3.75VA	2.5VA	1VA	FS10	FS10	FS10
XLSC4-300/5A	300A	5VA	3.75VA	1.5VA	FS10	FS10	FS10
XLSC4-400/5A	400A	5VA	3.75VA	2.5VA	FS10	FS10	FS10
XLSC4-500/5A	500A	7.5VA	5VA	3.75VA	FS10	FS10	FS10
XLSC4-600/5A	600A	10VA	7.5VA	5VA	FS10	FS10	FS10
XLSC4-750/5A	750A	12.5VA	10VA	7.5VA	FS10	FS10	FS10
XLSC4-800/5A	800A	12.5VA	10VA	7.5VA	FS10	FS10	FS10
XLSC4-1000/5A	1000A	20VA	15VA	10VA	FS10	FS10	FS10
XLSC4-1200/5A	1200A	45VA	30VA	15VA	FS10	FS10	FS10
XLSC4-1250/5A	1250A	45VA	30VA	15VA	FS10	FS10	FS10
XLSC4-1500/5A	1500A	60VA	45VA	20VA	FS10	FS10	FS10
XLSC4-1600/5A	1600A	60VA	45VA	20VA	FS10	FS10	FS10
XLSC4-2000/5A	2000A	60VA	45VA	20VA	FS10	FS10	FS10
XLSC4-2500/5A	2500A	60VA	45VA	25VA	FS10	FS10	FS10
XLSC4-3000/5A	3000A	60VA	45VA	30VA	FS10	FS10	FS10

XLSC3



XLSC4





XLSC5 RANGE Window 3.35 x 6.77 inches

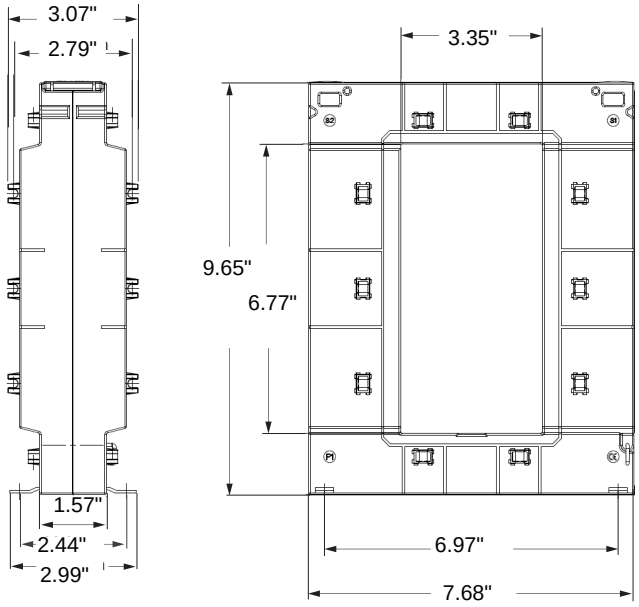
Case size: 7.67" wide x 2.44" deep x 9.65" high (195 x 62 x 245 mm)

Primary Rating: 500-5000A

Secondary Rating: 5A. 1A Ratio's available change part number to end in 1A e.g. XLSC5-500/1A

XLSC5 RANGE		ACCURACY			SECURITY FACTOR (ISF)		
Model Type	Primary Current	Class 3	Class 1	Class 0.5	Class 3	Class 1	Class 0.5
XLSC5-500/5A	500A	7.5VA	5VA	1.25VA	FS30	FS30	FS30
XLSC5-600/5A	600A	7.5VA	5VA	1.25VA	FS30	FS30	FS30
XLSC5-750/5A	750A	12.5VA	10VA	5VA	FS30	FS30	FS30
XLSC5-800/5A	800A	12.5VA	10VA	7.5VA	FS30	FS30	FS30
XLSC5-1000/5A	1000A	12.5VA	10VA	7.5VA	FS30	FS30	FS30
XLSC5-1200/5A	1200A	25VA	20VA	10VA	FS30	FS30	FS30
XLSC5-1250/5A	1250A	25VA	20VA	15VA	FS30	FS30	FS30
XLSC5-1500/5A	1500A	45VA	30VA	20VA	FS30	FS30	FS30
XLSC5-1600/5A	1600A	45VA	30VA	20VA	FS30	FS30	FS30
XLSC5-2000/5A	2000A	45VA	30VA	25VA	FS30	FS30	FS30
XLSC5-2500/5A	2500A	45VA	30VA	25VA	FS30	FS30	FS30
XLSC5-3000/5A	3000A	60VA	45VA	30VA	FS30	FS30	FS30
XLSC5-4000/5A	4000A	60VA	45VA	30VA	FS30	FS30	FS30
XLSC5-5000/5A	5000A	60VA	45VA	30VA	FS30	FS30	FS30

XLSC5



Busbar Mounting Kit Items	
M4 Busbar mounting Screws	
Push in metal feet	
Swivels	
Shoe for M4 Busbar mounting Screws	

	Quick comparison chart				
	XLSC1	XLSC2	XLSC3	XLSC4	XLSC5
Inside Height	1.29" (33mm)	2.16" (55mm)	3.35" (85mm)	4.92" (125mm)	6.77"(172mm)
Inside Width	0.90" (23 mm)	1.69" (43mm)	2.16" (55mm)	3.35" (85mm)	3.35" (85mm)
Case Height	4.17" (106mm)	4.92" (125mm)	6.22" (158mm)	7.79" (198mm)	9.65" (245mm)
Case Width	3.66" (93mm)	4.25" (108mm)	4.92" (125mm)	6.10" (155mm)	7.67" (195mm)
Case Depth	1.57" (40mm)	1.96" (50mm)	1.57" (40mm)	1.57" (40mm)	2.44" (62mm)
Panel or Wall Mounting	✓	✓	✓	✓	✓
Busbar Mounting	✓	✓	✓	✓	✓
Terminal Cover	✓	✓	✓	✓	✓
Primary Current	100A - 400A	100A - 800A	250A - 2000A	250A - 3000A	500A - 5000A
Max screw torque setting (Nm)	0.75	0.75	0.75	0.75	0.75

Accuracy Class:- A designation assigned to a current transformer the errors of which remain within specified limit under prescribed conditions of use.

Rated Burden:- The impedance of the secondary circuit on which the accuracy requirements are based. It is usually expressed as apparent power (in VA), at the rated secondary current and at a specified power factor.

Rated Output:- The value of the apparent power (in volt-amperes at a specified power factor) which the current transformer is intended to supply to the secondary circuit at the rated secondary current and with rated burden connected to it.

Highest System Voltage:- The highest rms line to line voltage which can be sustained under normal operating conditions at any time and at any point on the system. It excludes temporary voltage variations due to fault condition and the sudden disconnection of large loads.

Rated Insulation Level:- That combination of voltage values (power frequency and lightning impulse, or where applicable, lightning and switching impulse) which characterizes the insulation of a transformer with regard to its capability to withstand by dielectric stresses. For low voltage transformer the test voltage 4kV, at power-frequency, applied during 1 minute.

Rated Short Time Thermal Current (Ith):- The RMS value of the primary current which the current transformer will withstand for a rated time, with their secondary winding short circuits without suffering harmful effects.

Rated Dynamic Current (Idyn):- The peak value of the primary current which a current transformer will withstand, without being damaged electrically for mechanically by the resulting electromagnetic forces, the secondary winding being short-circuited.

Rated Continuous Thermal Current:- The value of current which can be permitted to flow continuously in the primary winding, the secondary windings being connected to the rated burdens, without the temperature rise exceeding the specified values.

Instrument Security Factor (ISF):- Instrument Security Factor is the ratio of Instrument Limit Primary Current to the rated Primary Current. Instrument Limit Current of a metering Current Transformer is the maximum value of primary current beyond which Current Transformer core becomes saturated. Instrument Security Factor of CT is the significant factor for choosing the metering Instruments which to be connected to the secondary of the CT. Security or Safety of the measuring unit is better, if ISF is low.