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L&T SWITCHGEAR
SAFE & SURE



Product
Update
March
2009

 **LARSEN & TOUBRO**
It's all about Imagining

L&T SWITCHGEAR
SAFE & SURE

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an Experience to Cherish...*

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Complete S1 range of C-POWER ACBs



New

Salient Features

- Complete range from 630A to 3200A
- Breaking capacity from 50kA to 60kA
- Available in electrical and manual draw-out versions
- Available with DN1, SR18, SR18G releases and also as bus-coupler
- High short time withstand capacity $I_{cu} = I_{cs} = I_{cw}$ for total selectivity
- High mechanical & electrical life across the entire range
- Fully rated neutral pole for 4 pole ACB (in NRYB & RYBN)
- Single stroke closing for manual ACBs
- Common height and depth across the range
- Unique gasket for IP54 protection
- suitable for Aluminium link termination

Ordering information for C-POWER S1 ACB:

Current Rating	Frame Size	Version	C-POWER S1 with DN1		C-POWER S1 with SR18G	
			3 Pole	4 Pole	3 Pole	4 Pole
			Cat. Nos.	Cat. Nos.	Cat. Nos.	Cat. Nos.
630A	I	MDO	SL93211A000	SL93221A000	SL946810000	SL946910000
		EDO	SL93214A000	SL93224A000	SL946840000	SL946940000
800A	I	MDO	SL93212A000	SL93222A000	SL946820000	SL946920000
		EDO	SL93215A000	SL93225A000	SL946850000	SL946950000
1000A	I	MDO	SL93213A000	SL93223A000	SL946830000	SL946930000
		EDO	SL93216A000	SL93226A000	SL946860000	SL946960000
1250A	I	MDO	SL931710000	SL931750000	SL952850000	SL952930000
		EDO	SL931730000	SL931770000	SL952890000	SL952970000
1600A	I	MDO	SL931720000	SL931760000	SL952860000	SL952940000
		EDO	SL931740000	SL931780000	SL952900000	SL952980000
2000A	I	MDO	SL947110000	SL947130000	SL947150000	SL947170000
		EDO	SL947120000	SL947140000	SL947160000	SL947180000
2500A	I	MDO	SL952610000	SL952650000	SL952870000	SL952950000
		EDO	SL952630000	SL952670000	SL952910000	SL952990000
3200A	I	MDO	SL952620000	SL952660000	SL952880000	SL952960000
		EDO	SL952640000	SL952680000	SL952920000	SL953000000

SR71 protection release family for C-POWER range of ACBs



New

Salient Features

- Micro controller based RMS sensing
- Comprehensive protection against overload, short circuit, Instantaneous earth fault & neutral overload
- High resolution LCD display
- Intelligent Pre-trip alarm to prevent undesired system shutdown
- Password protected settings & commands
- Communicates through Intrinsic RS485, MODBUS protocol
- 2 sets of storable protection setting
- Non volatile memory to store last 5 trip history and 128 event recordings
- Relay contacts for fault annunciation
- Thermal memory for faster tripping on recurrent overloads, i^2t based current for short-time and earth fault zones
- Auto doubling feature to prevent nuisance tripping
- Intelligent discrimination
- Total breaker control and monitoring through PC
- LED indication for POWER ON, different fault and pre trip-alarm
- Self-diagnostic and monitoring with tri-colour LED indication

SR71 release with PowerMan can be used to upgrade your existing system for comprehensive metering and energy saving solution.

Ordering information for SR71 Retro-fitting kit:

Catalogue Nos.	Description
SL947910000	Retrofit Kit SR71 - Fr.1, 3P; C-POWER
SL947920000	Retrofit Kit SR71 - Fr.2, 3P; C-POWER
SL947930000	Retrofit Kit SR71 - Fr.3, 3P; C-POWER
SL947940000	Retrofit Kit SR71 - Fr.4, 3P; C-POWER
SL947950000	Retrofit Kit SR71 - 4000C-3P; C-POWER
SL947960000	Retrofit Kit SR71 - Fr.1, 4P; C-POWER
SL947970000	Retrofit Kit SR71 - Fr.2, 4P; C-POWER
SL947980000	Retrofit Kit SR71 - Fr.3, 4P; C-POWER
SL947990000	Retrofit Kit SR71 - Fr.4, 4P; C-POWER
SL948000000	Retrofit Kit SR71 - 4000C-4P; C-POWER

U-POWER ACBs range enhancement



New

We are pleased to inform you that the following ratings are now available in U-POWER ACBs:

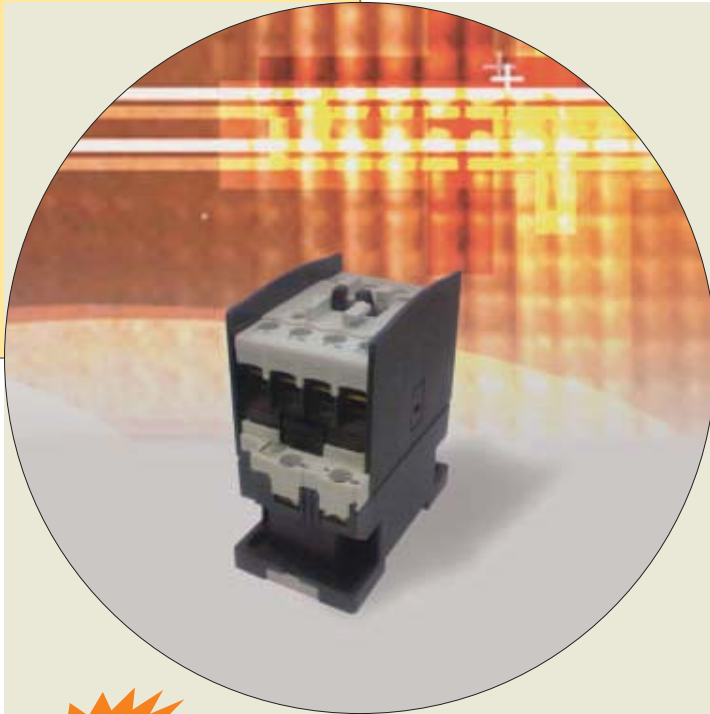
- 2000A in Frame-1
- 3200A in Frame-2
- 5000A & 6300A in Frame-3

Detailed U-POWER ACB offerings:

Current Rating (A)	Frame	U-POWER			
		N (50kA)	S (65kA)	H (80kA)	V (100kA)
800	1	Icu=Ics=50kA, Icw=42kA (1sec)	Icu=Ics=65kA, Icw=65kA (1sec)		
1000	1				
1250	1				
1600	1				
2000	1				
800	2			Icu=Ics=80kA, Icw=75kA (1sec)	Icu=Ics=100kA, Icw=85kA (1sec)
1000	2				
1250	2				
1600	2				
2000	2				
2500	2	Icu=Ics=65kA, Icw=65kA (1sec)	Icu=Ics=65kA, Icw=65kA (1sec)		
3200	2				
3200	3			Icu=Ics=80kA, Icw=80kA (1sec)	Icu=Ics=100kA, Icw=100kA (1sec)
4000	3				
5000	3				
6300	3				

Please refer product literature for complete information.

MNY range of Contactors



New

We are pleased to announce the availability of MNY range of three pole Power Contactors from 9-40AAC3. This Contactor has been designed to provide a cost effective solution for switching motor feeders up to 22.5 kW. Like all L&T Contactors, MNY Contactors have the highest quality and reliability standard.

The ordering information for MNY Contactors:

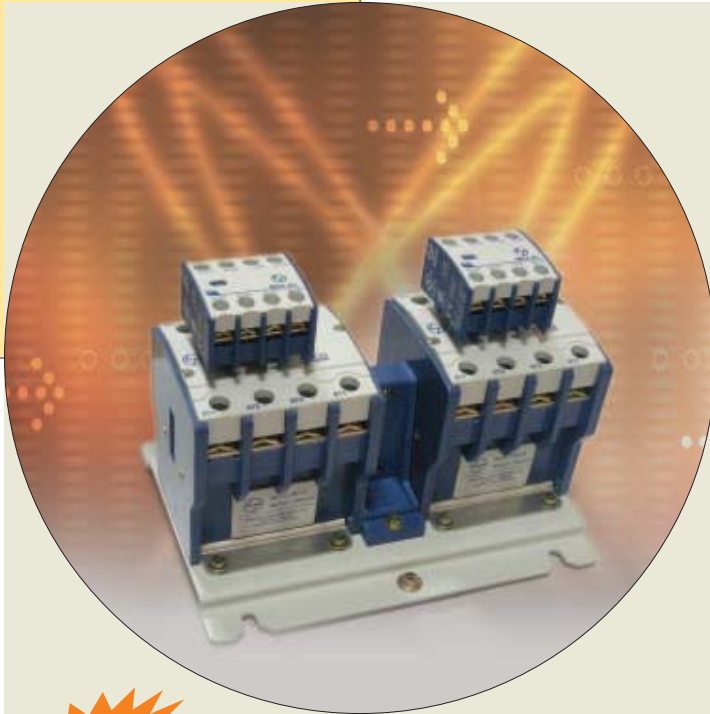
Product	Catalogue Nos.
MNY 9	ST94986/7
MNY 12	ST94988/9
MNY 18	ST94990/1
MNY 22	ST94992/3
MNY 25	ST94994
MNY 32	ST94995
MNY 40	ST94996

MNY contactors have to be ordered in multiples of 20 nos.

The salient features of this range are as given below:

- Wide operating band (65% to 120% of rated control voltage)
- Built in NO/NC auxiliary contacts up to 22A
- Base/DIN rail mounting possible
- Standard coil voltages: 110V, 240/220 and 415V AC
- MN2 Overload relays can be directly mounted
- Accessories: Add-on blocks, Mechanical interlock kit, surge suppressor common with MNX
- The spare coil of MNX will be suitable for MNY
- Type 2 chart of MNX is applicable for MNY

MCX 13 Contactors



New

We are pleased to introduce the MCX 13 Contactor. MCX 13 extends the MCX 11-12 frame to 80A AC1. This contactor has been designed to cater to the requirements of telecom OEMs. The MCX 13 Contactor can also be supplied with a new compact factory fitted mechanical interlock assembly.

Key features of MCX 13:

- Compact, the width of a mechanically interlocked pair is 196mm
- Wide operating band (from 50-120% U_e)
- Compatible with MNX A1/A2 top mounting add-on blocks

The ordering information for MCX 13 Contactor:

Product	Catalogue Nos.
MCX 13	CS94655
MCX 11 & MCX 13 with MCX-M2S MIL kit	CS94343
MCX 12 & MCX 13 with MCX-M2S MIL kit	CS94344
Two MCX 13 with MCX-M2S MIL kit	CS94345

New MPX range of Contactors



New

The MPX range of capacitor duty contactors has been upgraded. The range is now suitable for switching capacitor banks from 8kVAr to 60kVAr. These contactors come with a de-latched type early make auxiliary contact block that helps limit the capacitive inrush current and have a higher thermal current capacity.

The difference between the old and new MPX contactors are:

	Old MPX	New MPX
Rating	12.5-50kVAr	8-60kVAr
Type designation	MPX 11-51	MPX 8-60 (Reflects the kVAr rating of the capacitor bank)
Design	Non delatched	delatched type
In rush carrying capacity	upto 180 times	unlimited
Electrical life	0.15M	0.2 M
Frequency of Operation (cycle/hr)	120	120
No. of build in Add-on blocks	1NO+1NC upto 25kVAr 1NO from 33 to 50kVAr	1NO upto 15 kVAr
DIN rail mounting capability	Yes	Yes

The ordering information for MPX Contactors:

Product	Catalogue Nos.
MPX 8	ST41807
MPX 12	ST41808
MPX 15	ST41809
MPX 25	ST41810
MPX 30	ST41811
MPX 50	ST41812
MPX 60	ST41813
1NO+1NC Add-on block for MPX	ST94985

AuXC-1000 Auto Source Transfer Controller



New

The AuXC-1000 controller has been developed to control and supervise the automatic or manual transfer of a utility load from a principal power supply source to a stand-by. It includes all the necessary features to supervise and control power supply sources, composed of energy distribution systems or generating sets, and the corresponding transfer equipment, such as contactors, motorized circuit breakers and changeover switches.

The automatic transfer takes place whenever conditions predefined by the user take place, for example:

- Power supply source not respecting programmed limits
- The need to have a very reliable power source
- The need to use the most economical power source

The AuXC-1000 Controller can be offered along with:

- U Power / C Power range of ACBs
- d sine range of MCCBs
- MCX range of Contactors

The Ordering information of AuXC-1000 Controller:

Product	Catalogue No.
AuXC-1000 ASTS controller	ST80230

Hager-Over Voltage Release



New

The new unique MZ 209 over voltage release is specially designed to protect installations from effects of over voltages

- Monitors the voltage between phase and neutral conductor
- Breaks the supply by opening circuit breaker in case voltage between phase and neutral conductor increases the pre determined level, $U > 280 \text{ V}$
- Can be used with hager MCBs & RCDs

Causes of over voltage in LV system

- A faulty connection, supply between phases (400 V) instead of Ph & N (230 V)
- Poor voltage regulation leading to over voltages
- Presence of harmonics on the network
- Over voltage maintained by the local energy supplier
- An accidental loss of neutral on Medium Voltage / Low Voltage transformer

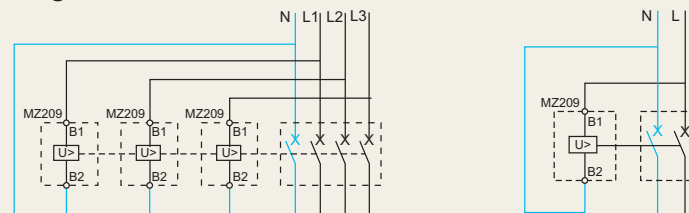


Hager-Over Voltage Release



New

Wiring Schemes



Technical Details

Rated voltage, U_n	: 230 V AC
Frequency	: 50 Hz
Rating insulation voltage(U_i)	: 500 V AC
Rated impulse voltage (U_{imp})	: 4 kV
Electrical consumption	: 0.7 W
Degree of pollution	: 3 as per IEC60947-2
Over voltage category	: III
Trip indication	: By RED flag
Over voltage category	: III

Simple & effective protection of sensitive devices against over-voltages.

Please Note: This product will not give protection for transient over voltage, in such case use SPD's.

Perito Security & Surveillance System



Perito is an exciting innovation in engineering and technology related to video surveillance solution from L&T.

Perito offers the full capacity and entire range of CCTV product basket. We offer a wide range of analogue, IP cameras & even mixture of both. L&T offers a complete range of products that make it easier than ever to create exactly the right solution to meet your current and future needs.

Perito is a French word which means “Intelligent Supervisor”. Our video surveillance is focused on providing video information rather than providing huge video data. The video analytic feature in the system makes the system Intelligent from the point of view of supervisory monitoring & control.

Perito products can enhance the value of your current investments while delivering flexible new monitoring possibilities. Best of all, Perito CCTV product comes with the back-up and peace of mind that you'd expect from L&T.

Sophisticated cameras

Perito cameras with industry leading power economy are ideal for solar powered, battery powered, mobile & other special applications.

Perito's Dome Cameras

Vandal resistant high resolution and low light day/night dome cameras uses highly sensitive 1/3” interline transfer CCD Image Sensor and all state circuitry which provides long life and high reliability.

Perito Security & Surveillance System



Perito's IR, Weatherproof high speed, PTZ camera

The integrated PTZ high definition color camera systems feature universal variable pan/tilt, infrared lighting, multi-functional decoder, character super imposing, and alarm input/output.

Perito's Integrated PTZ Control Camera with multi-protocol capabilities

The integrated high-speed P/T camera systems represent a state-of-the-art line of indoor or outdoor applications, with features like powder coating, aluminium construction, integrated camera sled assembly mount Pan/Tilt cameras. These leading P/T camera systems are an ideal products for the changing environment that is today's security industry.

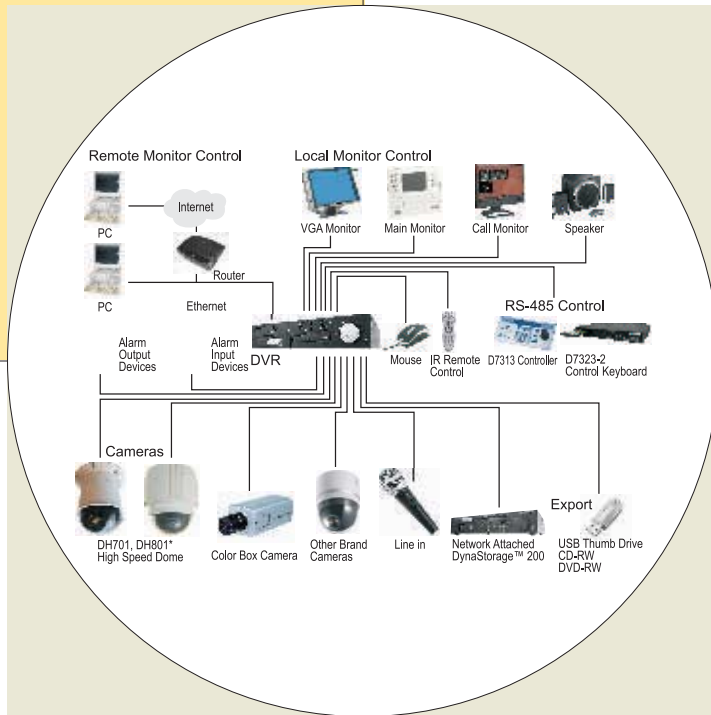
Widest choice of DVRs

Basic/Entry Series: The BCDVRE Series is a multi-function MPEG-4 DVR developed to meet the low cost requirements of the general purpose surveillance system. Embedded with the Linux operating system, the series applies very price-competitive hardware architecture but still offers the user worthy features.

Real-time hybrid DVR: The BCDVRC series is a real-time hybrid DVR which supports real-time IP cameras and analog cameras recording up to 16 channels. With Modular Upgrade Kits, users can expand BCDVRC application to real-time recording, POS tracking, and audio monitoring. The BCDVRC software and Central Management System (CMS) also provide distant accessibility for remote system control.

High end Series : BCDVRH series network digital video recorder is a new generation excellent digital surveillance product. It uses the Real Time OS and embedded MCU. It has both features of digital video recorder (DVR) and digital video server (DVS).

Perito Security & Surveillance System



Intelligent Video Analysis and Network Video Management System

It is a web-based remote video monitoring and managing application, for multiple analog CCTV and network video cameras, in large enterprises or at remote locations. The software manages unlimited number of third party cameras of various makes, and runs as a standalone scalable application or a part of BMS system.

Housing, PAN-TILT, and Mounts

A wide range of rugged housing, PAN-TILT, and multiple mounts are available to choose from. Some of these are Mounting Brackets, Outdoor Housing w/heater and/or Blower, Professional Outdoor Housing w/2-Axis Cable-Inside Aluminum Bracket, IR Illuminator (Options: AC110V or AC220V), Pan/Tilt Units, Mounting Kits for SPEED DOMES etc.

LCD Monitors and Accessories

CCTV Monitors available are high resolution 7" LCD with AV, 17" LCD with AV & 19" LCD with AV.

Choice of transmission methods

Perito offers widest choice of transmission methods in addition to standard analogue over coaxial. Wireless communication can be part of video transmission.

IP: Perito speed domes provide viewing & PTZ control from anywhere via Internet, or over LAN/WAN. Existing CAT 5 wiring can be used and unlimited users can be added without the expense of monitors & Keyboards.

Fiber optic: Perito's Fiber Optic Speed Domes incorporate a fiber optic modem for transmission over long distances or through harsh (EMI, RFI) environments.