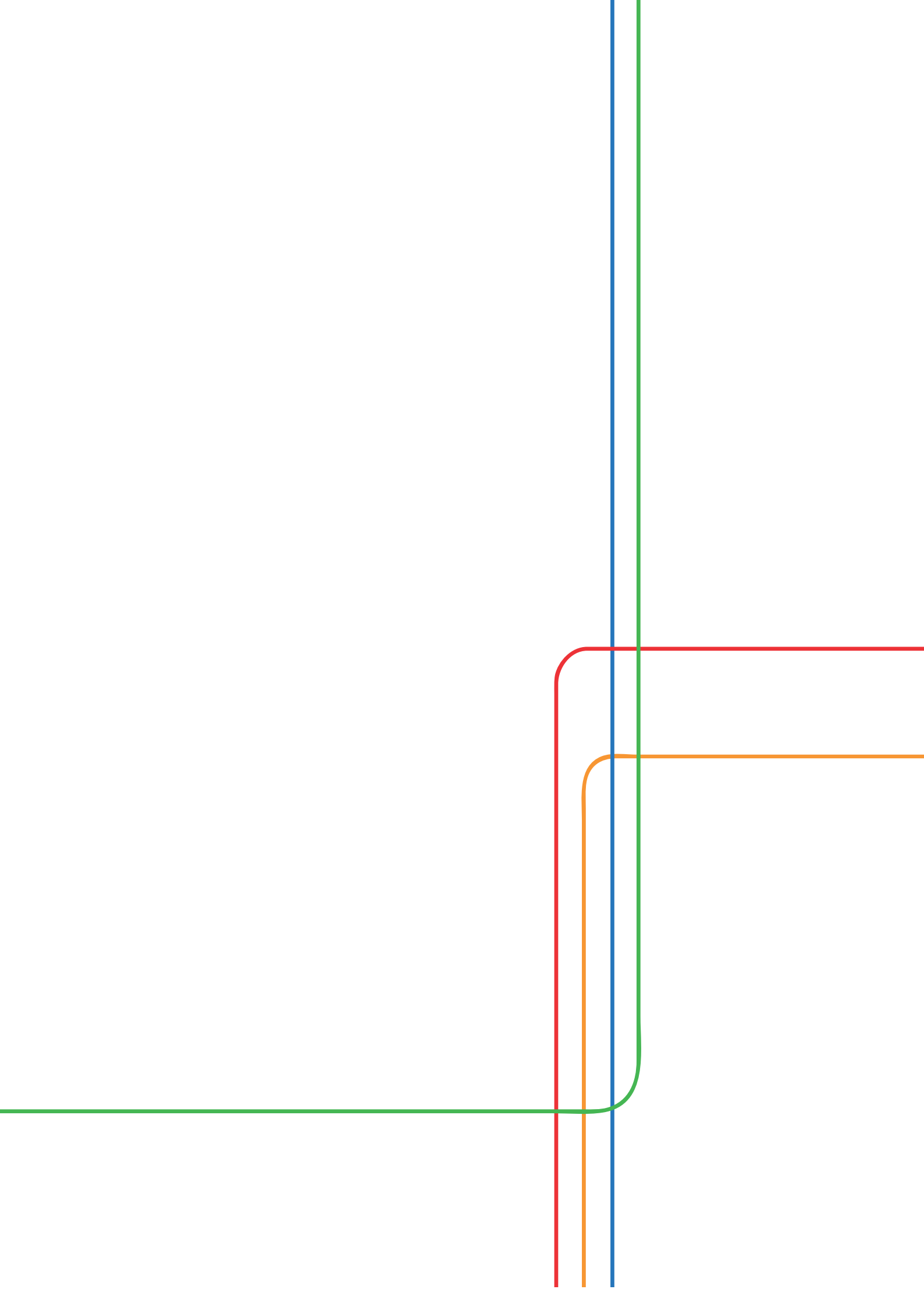


Integrated Brochure





R R Kabel is a part of R R Global, which is one of the leading conglomerates in the electrical sector. Working with determination to produce products with best technologies, R R Kabel has always made the latest advances in wire design and engineering. Today, R R Kabel offers the latest and widest range of premium wires & cables for various residential, commercial, industrial and infrastructure purposes.

For us at R R Kabel think wires are not just objects, we believe that wires play the role of nerves in the body. When you believe this, you have designers, engineers, fabricators, and other partners who need to have incredible design and commitment to pursue and create a product that can be trusted, and relied upon.

We believe that the future of design lies with innovation that instigates one to push boundaries, eliminate borders between sciences. The materials we use may sometimes be unique, sometimes experimental, many are collaborations but they all represent extraordinary research and dedication by engineers, designers and visionaries.

R R Kabel is constantly emerging with new marketing and technical perspectives that are globally significant, we are aiming to create significance of our multi-faceted range when designing making it better environment and the customers.



INDEX

## 01 CONSTRUCTION AND BUILDING RANGE

SUPEREX FR	008
FLAMEX FR-LSH	009
UNILAY HR FR	010
FIREX LS0H	011
RATNA CO-X	013
RATNACOM	015
RATNALAN CAT 5e/6	016
CCTV CAMERA CABLE	018
SPEAKER CABLE	019
BUS J-Y(St)Yh 2 x 2 x 0.8	020
HALOGEN-FREE H07Z-R-6491B	021
PVC INSULATED BUILDING WIRE (H07V-R)-6491X	023
6181Y - BS 6004	025
6181XY - BS 7889	026
PVC/PVC TWIN CORE FLAT CABLE (IS 694)	027
PVC/PVC 3 CORE SUBMERSIBLE FLAT CABLE	029
XLPE/PVC 3 CORE SUBMERSIBLE FLAT CABLE 1.1 kV	031
STEEL BRAIDED YSY 1.1 kV	033

## 02 SINGLE CORE

RATNAFLEX FLEXIBLE (IS 694)	038
H05V-K & H07V-K	040
H05V2-K & H07V2-K	042
H05Z-K & H07Z-K	043
H05Z1-K & H07Z1-K	045
BS 6231 CK 90°C	047

## 03 CONTROL CABLES

RATNAFLEX MULTICORE (IS 694)	052
CONTROL CABLE (IS 694)	055
JB-500	059
JB-750	062
H03 / H05V2V2H2-F & H03 / H05V2V2-F PVC 90°C	064
JB-YCY	066
JB-YSY	069
JB-BLACK 0.6/1 kV	071
JZ-500	073
JZ-YCY	079
JZ-YSY	083

JZ-CY	086
JZ-BLACK 0.6/1 kV	089
JZ-YCY BLACK 0.6/1 kV	092
JZ-EB	095
JZ-EB CY	097
JB-H	099
JZ-H	101
JZ-HCH	104

## 04 DRAG CHAIN AND SERVO CABLES

JZ-30400 P	110
JZ-35400 CP	113
JZ-40415 CP	116
JZ-45440 P	119
JZ-50440 CP	121
SERVO 55700	123
SERVO 60700 CY	124
2YSLCY-JB-SERVO	125
SERVO FD 70750 P	127
SERVO FD 75781-CY	128
SERVO FD 80785 P	129
SERVO FD 85810	130
SERVO FD 90810 CY	133
SERVO FD 95810 P	136
SERVO FD 30810 CP	139
SERVO FD 05855 P	141
SERVO FD 10855 CP	144

## 05 DATA & COMMUNICATION CABLES

LiYY	150
LiYY (TP)	154
LiYCY	156
LiYCY TP	161
Li2YCY (TP)	163
Li2YCY PiMF-CY	166
BUS C (Y) 1 X 2 X 0.64	168

## 06 APPLIANCE WIRING MATERIAL

TRI RATED CABLE	172
UL 1015	174
UL 1007	176
UL 1569	177
UL 1275	178
UL 2587	179
UL 2464	182
UL 2576, 2598	185
UL 3289/3321/3173/3271/3344 XLPE CABLE	187

## 07 INSTRUMENTATION CABLES

RE-Y(St)Y - SINGLE & MULTI-PAIR	192
RE-Y(St)Y PiMF - MULTI-PAIR	196
RE-2X(St)Y - SINGLE & MULTI-PAIR	200
RE-2X(St)Y PiMF - MULTI-PAIR	204
RE-Y(St)YSWAY - SINGLE & MULTI-PAIR	208
RE-Y(St)YSWAY PiMF - MULTI-PAIR	212
RE-2X(St)YSWAY - SINGLE & MULTI-PAIR	216
RE-2X(St)YSWAY PiMF - MULTI-PAIR	220
RE-Y(St)Y - MULTICORE	224
RE-2X(St)Y - MULTICORE	228
RE-Y(St)YSWAY - MULTICORE	232
RE-2X(St)YSWAY - MULTICORE	236

## 08 SILICON CABLES

SiF/SiFF	242
SiHF	245
SiHF-GLS	248
SiF-GL, SiD, SiD-GL	250

## 09 AUTO CABLES

SXL	254
GXL	255
TXL	256
AV	257
AVS	258
AVSS	259
FLY	260
FLYW	261

FLYK
FLRYK
FLRY A
FLRY B
FLUY
FLRYW
FL11Y
FLYY
FLR13Y
FLRY n x (TWISTED CABLES)
ACW

THIN WALL MULTICORE CABLES
TINNED COPPER CABLES
PVC BATTERY CABLES
ELASTOMERIC BATTERY CABLES
WELDEX-SI (SINGLE INSULATED)
WELDEX-DI (DOUBLE INSULATED)
COPPER EARTHING BRAIDS
PVC IGNITION CABLES

## 10 FIRE AND SECURITY CABLES

FIRE ALARM CABLES
FIRE SURVIVAL CABLE
SINGLE CORE FIRE RESISTANT

## 11 POWER CABLES

AYY/YY-1 CORE
AYY/YY-2 CORE
AYY/YY-3 CORE
AYY/YY-3.5 CORE
AYY/YY-4 CORE
AYFaY/YFaY-AYWaY/YWaY
AYFaY/YFaY-AYWaY/YWaY-2 CORE
AYFaY/YFaY-AYWaY/YWaY-3 CORE
AYFaY/YFaY-AYWaY/YWaY-3.5 CORE
AYFaY/YFaY-AYWaY/YWaY-4 CORE
YY/YFY/YWY-1.5 Sq. mm
YY/YFY/YWY-2.5 Sq. mm
A2XY/2XY-1 CORE
A2XY/2XY-2 CORE

A2XY/2XY-3 CORE	326
A2XY/2XY-3.5 CORE	327
A2XY/2XY-4 CORE	328
A2XFaY/2XFaY-A2XWaY/2XWaY	329
A2XFY/2XFY-A2XWY/2XWY-2 CORE	330
A2XFY/2XFY-A2XWY/2XWY-3 CORE	331
A2XFY/2XFY-A2XWY/2XWY-3.5 CORE	332
A2XFY/2XFY-A2XWY/2XWY-4 CORE	333
2XY/2XFY/2XWY-1.5 Sq. mm	334
2XY/2XFY/2XWY-2.5 Sq. mm	335
NYY	339
POWER CABLE-BS 5467	340

## **12 APPLICATION BASED CABLES**

SOLAR CABLE	346
POWER CORDS	348
UNINYVIN CABLE	349
WELDEX-IS 9857	352
WELDEX-SI (SINGLE INSULATED)	353
WELDEX-DI (DOUBLE INSULATED)	354
ELEVATOR CABLE	355
BRAIDED STRAP-ABC/ATC	358
TUBULAR BRAIDS	360
BARE COPPER CONDUCTOR	361

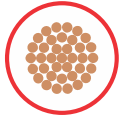
## **13 APPENDIX 364**



## CONSTRUCTION AND BUILDING RANGE







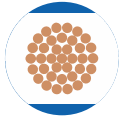
**Superx FR**

Page No. : 08



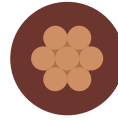
**Bus J-Y (St) Yh 2x2x0.8**

Page No. : 20



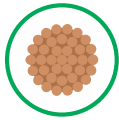
**Flamex FR-LSH**

Page No. : 09



**Halogen-Free H07Z-R-6491B**

Page No. : 21 - 22



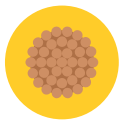
**Unilay HR FR**

Page No. : 10



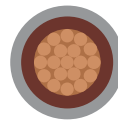
**PVC Insulated Building Wire (H07V-R)-6491X**

Page No. : 23 - 24



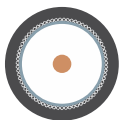
**Firex LSOH**

Page No. : 11 - 12



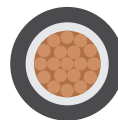
**6181Y - BS 6004**

Page No. : 25



**Ratna CO-X**

Page No. : 13 - 14



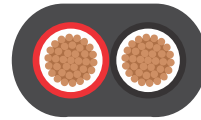
**6181XY - BS 7889**

Page No. : 26



**Ratnacom**

Page No. : 15



**PVC/PVC Twin Core Flat Cable (IS 694)**

Page No. : 27 - 28



**Ratnalan CAT 5e/6**

Page No. : 16 - 17



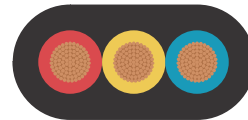
**PVC/PVC 3 Core Submersible Flat Cable**

Page No. : 29 - 30



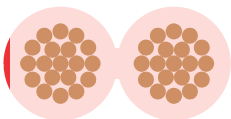
**CCTV Camera Cable**

Page No. : 18



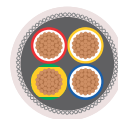
**XLPE/PVC 3 Core Submersible Flat Cable 1.1 KV**

Page No. : 31 - 32



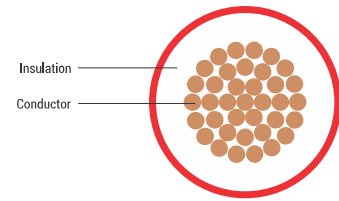
**Speaker Cable**

Page No. : 19



**Steel Braided YSY 1.1 KV**

Page No. : 33 - 35



India's 1<sup>st</sup> REACH and RoHS Compliant Cable | Flame Retardant Cable.

## Application

Suitable for wiring in all types of residential and commercial infrastructure, where fire and electrical safety is utmost important.

## Technical Data

**Approvals :** IS 694 marked, FIA/TAC

**Voltage Grade :** Up to and including 1100V

**Conductor :** Thin strands of electrolytic copper are multi-drawn for uniformity of resistance, dimension and flexibility. The strands are twisted with high precision to impart circularity for the conductor.

**Insulation :** Specially formulated heat resistant & flame retardant PVC insulation is used. The FR property retards the propagation of flame without compromising safety.

**Insulation Conformity :** IS 5831, Type A + FR

**Colours :** Red, yellow, blue, black, green, grey & white

**Marking :** The cables are printed with marking of 'SUPEREX FR' upto 4 Sq. mm & "RR KABEL FR" for size 6 Sq. mm and onwards

**Packing :** 90 mtr. coil is packed in protective cartons. Project packing of 180 mtr. also available.

## Cable Design Parameters

Kindly complete the part numbers for these cables by adding the suffix (in place of 'xx') for the colour required:

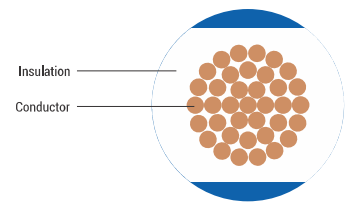
01 - green, 02 - black, 03 - red, 04 - blue, 05 - yellow, 06 - grey, 07 - white.

Part Number	Nominal Cross Sectional Area (Sq. mm)	Nominal Insulation Thickness (mm)	Number *Nominal Dia. of Strands	Approx. Overall Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Current Rating (Amps)	
						Casing	Concealed
01010101xxy0	0.5	0.6	16/0.2	2.1	39.0	5	4
01010102xxy0	0.75	0.6	24/0.2	2.3	26.0	9	8
01010103xxy0	1	0.7	14/0.3	2.7	18.1	14	13
01010104xxy0	1.5	0.7	22/0.3	3.0	12.1	18	16
01010105xxy0	2.5	0.8	36/0.3	3.7	7.41	24	20
01010106xxy0	4	0.8	56/0.3	4.1	4.95	30	26
01010107xxy0	6	0.8	84/0.3	4.6	3.30	38	33
01010108xxy0	10	1.0	140/0.3	7.0	1.91	52	45
01010109xxy0	16	1.0	126/0.4	8.1	1.21	70	60

\*Conductor as per IS 8130

## Properties

Test	Test Method	Values
Limited Oxygen Index	IS 10810 P-58	> 29%
Limited Temp. Index	IS 10810 P-64	>250 °C



India's 1<sup>st</sup> REACH Compliant Cable | Flame Retardant Low Smoke Low Halogen.

## Application

Suitable for use in conduit and for fixed, protected installation particularly suitable for wiring in fire and explosion prone areas, chemical factories, densely wired areas, public buildings, schools, hospitals, commercial complexes, theatres, etc.

## Technical Data

**Approvals :** IS 694 marked, FIA/TAC

**Voltage Grade :** Up to and including 1100V

**Conductor :** Thin strands of electrolytic copper are multi-drawn for uniformity of resistance, dimension and flexibility

**Insulation :** Specially formulated flame retardant low smoke low halogen compound to restrict the spread of flames in fire situation. The smoke emitted by the burning cable is considerably low compared to traditional cables. This ensures improved visibility for evacuation of trapped victims and facilitates fire fighting operation.

**Insulation Conformity :** IS 5831 Type A/D FR-LSH 70°C

**Colours :** Entire cable has white base and a double strip of Green, Black, Red, Yellow, Blue, Grey, running along the cable length

**Marking :** The cables are printed with the marking of 'FLAMEX FR-LSH'

**Packing :** 90 mtr. coils packed in protective cartons. Project coils of 180 mtr. also available.

## Cable Design Parameters

Kindly complete the part numbers for these cables by adding the suffix (in place of 'xx') for the colour required:

01 - Green, 02 - Black, 03 - Red, 04 - Blue, 05 - Yellow, 06 - Grey.

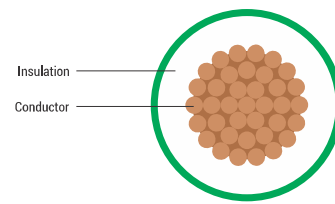
Part Number	Nominal Cross Sectional Area (sq. mm)	Nominal Insulation Thickness (mm)	Number *Nominal Dia. of Strands	Approx. Overall Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Current Rating (Amps)	
						Casing	Concealed
01020101xx50	1	0.7	14/0.3	2.7	18.1	14	13
01020102xx50	1.5	0.7	22/0.3	3.0	12.1	18	16
01020103xx50	2.5	0.8	36/0.3	3.7	7.41	24	20
01020104xx50	4**	0.8	56/0.3	4.1	4.95	30	26

\*Conductor as per IS 8130.

\*\*Insulation Type D as per IS 5831.

## Properties

Test	Test Method	Values
Limited Oxygen Index	IS 10810 P - 58	> 29%
Limited Temperature Index	IS 10810 P - 64	> 250°C
Smoke Density (Light Absorption)	IS 13360 P - 6/Sec 9	< 60%
Acid Gas Generation	IS 10810 P - 59	< 20%



**India's 1<sup>st</sup> Heat Resistant and Flame Retardant REACH Compliant Cable with Unilay Conductor.**  
**No Loose Contacts, No Broken Ends | No Sparking and Overheating.**

## Application

Suitable for use in conduit and for fixed, protected installation, ideal for high density wiring.

## Technical Data

**Approvals :** IS 694 marked, FIA / TAC

**Voltage Grade :** Up to and including 1100V

**Conductor :** Thin strands of electrolytic copper are multi-drawn for uniformity of resistance, dimension and flexibility. The drawn strands are uni-laid with high precision and compacted. Thus forming a perfectly circular conductor which enables reduction in overall diameter for space saving in high density wiring.

**Conductor Speciality :** The strands do not get cut when stripping the insulation. The conductor offers perfect contact at pins, terminals and sockets. Thus, eliminating spot heating and sparking.

**Insulation :** Specially formulated heat resistant & flame retardant PVC insulation is used. The HR FR property retards the propagation of flame without compromising safety.

**Insulation Conformity :** IS 5831, Type C - HR 85°C + FR

**Colours :** Green, Black, Red, Yellow, Blue, Grey, White

**Marking :** The cables are printed with marking of 'RR-UNILAY HR FR'

**Packing :** 90 mtr. coils packed in protective cartons

## Cable Design Parameters

Kindly complete the part numbers for these cables by adding the suffix (in place of 'xx') for the colour required:

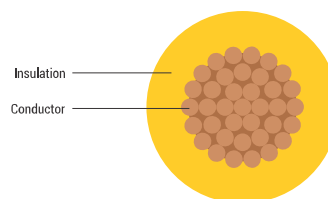
01 - Green, 02 - Black, 03 - Red, 04 - Blue, 05 - Yellow, 06 - Grey, 07 - White

Part Number	Nominal Cross Sectional Area (Sq. mm)	Nominal Insulation Thickness (mm)	Number *Max. Dia. of Strands	Approx. Overall Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Current Rating (Amps)	
						Casing	Concealed
01030101xx40	1.0	0.7	37/0.19	2.6	19.5	12	11
01030102xx40	1.5	0.7	37/0.23	3.0	13.3	16	15
01030103xx40	2.5	0.8	61/0.23	3.6	7.98	23	19
01030104xx40	4.0	0.8	61/0.29	4.1	4.95	30	26
01030105xx40	6.0	0.8	91/0.29	4.6	3.30	38	33

\*Conductor as per IS 8130

## Properties

Test	Test Method	Values
Limited Oxygen Index	IS 10810 P-58	> 29%
Limited Temp. Index	IS 10810 P-64	>250°C



**LSOH (Low Smoke Zero Halogen) insulation 90°C with UNILAY conductor | Non-Toxic and Non-Corrosive | Does not propagate flame and fire.**

## Application

This cable is ideal for use in domestic applications, electrical switchgear, industrial lighting, control panels, wiring of switchboards, control, general wiring, instrumentation and communication systems. In many countries, it is mandatory to use these LSOH cables in Auditoriums, Hospitals, Hotels, Schools, Stadiums, and all constructions for public usage.

## Technical Data

**Conductor :** Thin strands of Electrolytic Copper are multi-drawn for uniformity of Resistance, Dimension and Flexibility. The drawn strands are uni-laid with high precision and compacted. Thus forming a perfectly circular conductor which enables reduction in overall diameter for space saving in high density wiring.

**Conductor Speciality :** The strands do not get cut when stripping the insulation. The conductor offers perfect contact at pins, terminals and sockets. Thus, eliminating spot heating and sparking.

**Insulation :** Polyolefin cross linked EI5 to BS EN 50363-5 Low Smoke Zero Halogen (LSOH).

**Insulation Conformity :** EN 60332-1-2, EN 60332-3 & EN 60754-1 & 2

**Colours :** Green, Black, Red, Yellow, Blue, Grey, White

**Marking :** The cables are marked 'FIREX LSOH'

**Packing :** 90 mtrs. Coils packed in protective cartons.

**Standard :** BS EN 50525-3-41

**Temperature range :** -15°C to +90°C

## Properties

The insulation does not burn readily. It does not melt and drip, smoke is negligible, transparent, non-toxic. In a fire situation the people trapped in fire do not suffocate. This facilitates fire fighting and rescue operations. This cable has extended service life against the conventionally used cables.

Ozone resistant according to EN 60811-2-1

## Cable Design Parameters

Kindly complete the part numbers for these cables by adding the suffix (in place of 'xx') for the colour required

01 - Green, 02 - Black, 03 - Red, 04 - Blue, 05 - Yellow, 06 - Grey, 07 - White

Part Number	Nominal Cross Sectional Area (Sq. mm)	Nominal Insulation Thickness (mm)	Number *Max. Dia. of Strands	Approx. Overall Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Current Rating (Amps)	
						Casing	Concealed
01010101xx60	1.0	0.7	37/0.19	2.6	19.5	17	15
01010102xx60	1.5	0.7	37/0.23	3.0	13.3	21	18
01010103xx60	2.5	0.8	61/0.23	3.6	7.98	30	24
01010104xx60	4.0	0.8	61/0.29	4.1	4.95	41	33
01010105xx60	6.0	0.8	91/0.29	4.6	3.30	53	43

\*Conductor as per IEC 60228

## Advantages - FIREX LSOH Vs LSOH

Sr. No.	Properties	FIREX LSOH- Cross linked	LSOH-Thermoplastic (Other Products)
1	Thermal Resistance	Max. operating temperature 90°C	Max. operating temperature 70°C
2		No change under heat	Deform and soften under heat
3		Max. short circuit temp. rating 250 °C	Max. short circuit temp. rating 160 °C
4	Structure	3-Dimensional structure	Usually linear in structure
5	Hygroscopic nature (Higher water absorption reduces electrical properties)	Non Hygroscopic	Comparatively hygroscopic
6	Electrical Properties	Higher dielectric strength	Lower dielectric strength
7		Higher current carrying capacity	Lower current carrying capacity

## Test Parameters - FIREX LSOH

Test	Test Method	Values
Limited oxygen index	ASTM-D 2863	≥ 34%
Limited temp. index	ASTM-D 2863	> 350°C
Smoke density (Light absorption)	ASTM-D 2843	< 7%
Acid gas generation	IEC-60754-1	0.0%

