Svarm

# Driving the future of mobility

## CABLES FOR AUTOMOTIVE APPLICATIONS

TELECOM | AUTOMOTIVE | DEFENCE | RAILWAYS | POWER | PROJECTS

## SVARN AUTOMOTIVE CABLES

# Powering the road ahead with cutting-edge Cabling Solutions

In a world where progress knows no bounds, Svarn is consistently pushing forward, seeking new horizons and contributing to the nation's growth. The Indian automotive sector stands as a formidable force, constituting 7.5% of India's aggregate GDP and an impressive 49% of its manufacturing GDP. Projections indicate that by 2026, the automotive parts export industry will contribute approximately 7% to the nation's GDP.

Recognising this opportunity trajectory, Svarn is steadfastly committed to fostering the growth of the automotive sector. Demonstrating this commitment, Svarn has committed substantial investments in automotive endeavours. As an initial step, it has acquired a significant parcel of land spanning 10 acres in Ghiloth, Rajasthan, to establish a cutting-edge automotive cables manufacturing facility.

Leveraging over two decades of expertise in cable manufacturing for a wide range of industrial applications, Svarn is strategically positioned to deliver cutting-edge cabling solutions customised to meet the requirements of manufacturers in both the internal combustion engine (ICE) and electric vehicle (EV) sectors.

Svarn

## ABOUT US

At Svarn, we're pioneers in turning big ideas into real-world solutions. Our legacy of innovation, rooted in the essence of "Svarn" or Gold, has thrived since 2005. With over 3,000 dedicated employees, we're constantly pushing the boundaries of technology to benefit our customers and society. Our impact spans across six key industries, supported by seven cutting-edge manufacturing facilities and global offices in strategic locations. Through relentless innovation, we're shaping a prosperous and sustainable future **— inspired by possibilities.**


Know more at www.svarn.com

# STANDARD AUTOMOTIVE CABLES

Svarn, with its extensive knowledge and proficiency in cable manufacturing, provides a wide range of cable solutions tailored to meet the diverse needs of automotive systems. From general-purpose to specialised cables, Svarn ensures compatibility and safety across all applications. By adhering to stringent standards set by different countries and automotive regulatory bodies, Svarn's cables not only ensure optimal performance and durability but also contribute to enhancing effciency and simplifying vehicle design and assembly processes.

## ISO 6722-1

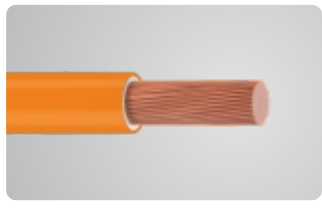
### 60V & 600V

**FLRY – B:** Conductor construction structure A, B
**FLRY – C:** Conductor construction structure A, B
**FLRY – D:** Conductor construction structure B

## JASO D611

### 25 VAC & 60 VDC
### Temp. up to 800C

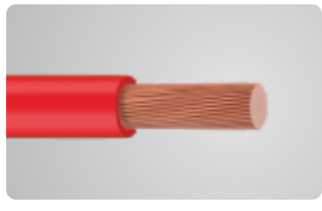
AV | AVS | AVSF | AVSSF
AVF | AVSS | CIVUS



## Battery Cable

### IS 2465 & IS 694

8 sqmm to 120 sqmm



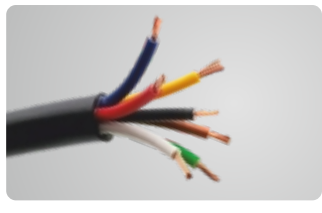
## SAEJ 1128

22AWG to 10AWG

TWP | GPT | HDT

## Multi Core Cables

2 Core 0.13 sqmm to
12 Core 2.5 sqmm



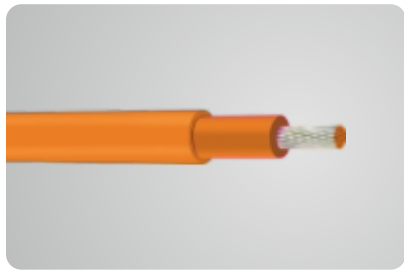
# XLPO & XLPE INSULATED CABLES (T3)

ISO 6722-1, ISO 19642 | Temperature Class - T3 | -40°C to +125°C

Cross-Linked Polyolefin insulated cables stand out in the automotive industry for their remarkable versatility and resilience. Through the cross-linking process, their insulation gains superior thermal and chemical resistance. These cables are favoured for their capacity to endure high temperatures, resist abrasion, and withstand exposure to sunlight, while ensuring consistent electrical conductivity essential for automotive systems.

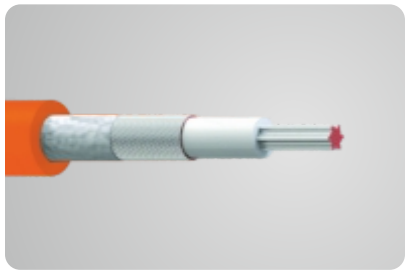
**Single Core Insulated Cable – Thin Wall**

**Single Core Insulated Cable – Thick Wall**



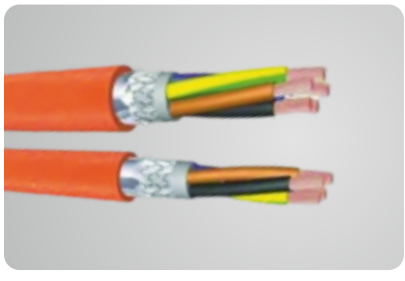
**Single Core Insulated & Sheathed Unscreened Cable – Thin Wall**

**Single Core Insulated & Sheathed Unscreened Cable – Thick Wall**

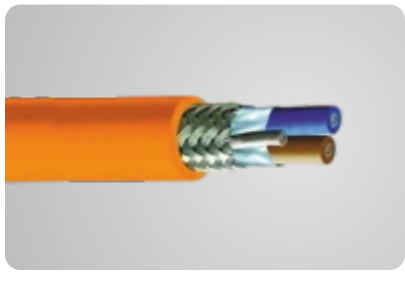


**Single Core Insulated & Sheathed Screened Cable – Thin Wall**

**Single Core Insulated & Sheathed Screened Cable – Thick Wall**



**Multi Core Screened Cable – Thin Wall**



**Multi Core Screened Cable – Thick Wall**

**Multi Core Unscreened Cable – Thin Wall**

**Multi Core Unscreened Cable – Thick Wall**

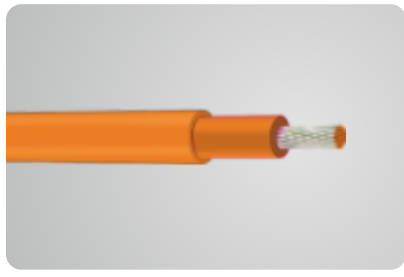
# XLPO INSULATED CABLES (T4)

## ISO 6722-1, ISO 19642 | Temperature Class - T4 | -40°C to +150°C

XLPO cables are specifically tailored for the automotive industry, among other sectors, offering resilience in high-temperature environments up to 150°C. These cables are ideal for automotive applications, ensuring both electrical integrity and mechanical strength even during prolonged exposure to extreme temperatures. Their selection in automotive systems underscores their reliability and suitability for demanding conditions.

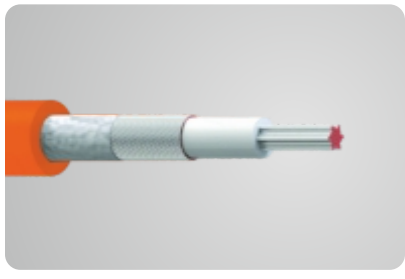
**Single Core Insulated Cable – Thin Wall**

**Single Core Insulated Cable – Thick Wall**



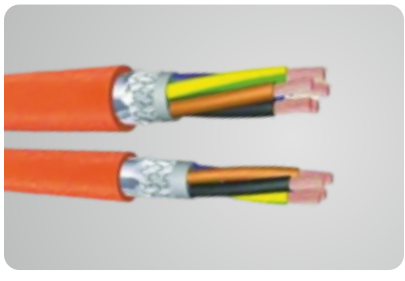
**Single Core Insulated & Sheathed Unscreened Cable – Thin Wall**

**Single Core Insulated & Sheathed Unscreened Cable – Thick Wall**

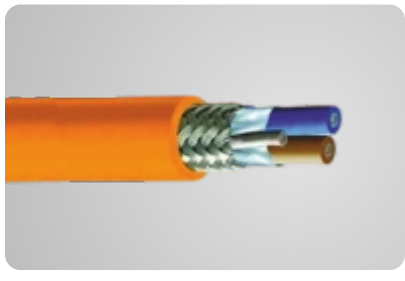


**Single Core Insulated & Sheathed Screened Cable – Thin Wall**

**Single Core Insulated & Sheathed Screened Cable – Thick Wall**



**Multi Core Screened Cable – Thin Wall**



**Multi Core Screened Cable – Thick Wall**

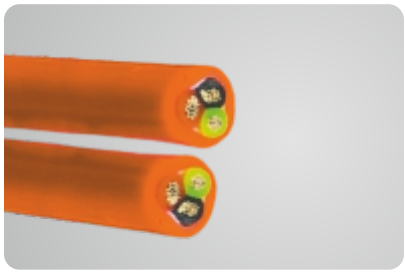
**Multi Core Unscreened Cable – Thin Wall**

**Multi Core Unscreened Cable – Thick Wall**

# SILICONE CABLES

## ISO 6722-1, ISO 19642 | Temperature Range: -40°C to +180°C
## Conductor: Annealed Bare Copper or Annealed Tinned Copper

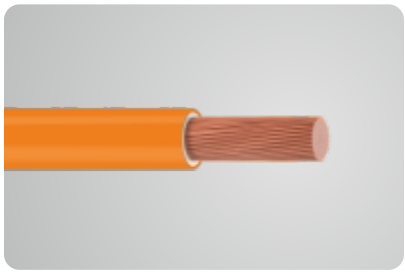
Silicone cables are extensively employed in the automotive industry, particularly in electric and hybrid vehicles, for high-voltage applications. Renowned for their flexibility, these cables excel in high temperature environments and demonstrate exceptional resistance to damage from various chemicals, ensuring robust performance in automotive systems.



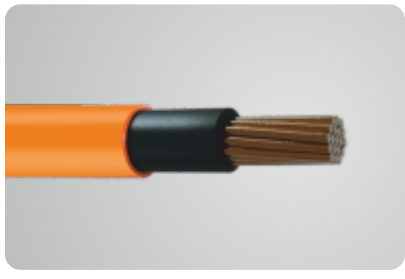
**Multi Core Screened Cable – Thick Wall**

**Single Core Insulated – Thin Wall**

**Single Core Insulated – Thick Wall**



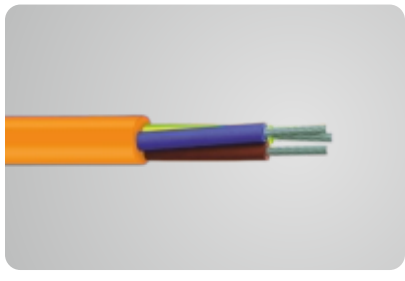
**Single Core Insulated & Sheathed Unscreened Cable – Thin Wall**



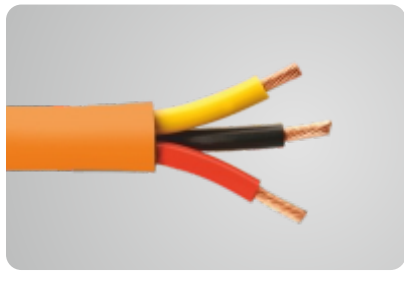
**Single Core Insulated & Sheathed Cable – Thick Wall**

**Single Core Insulated & Sheathed Screened Cable – Thin Wall**

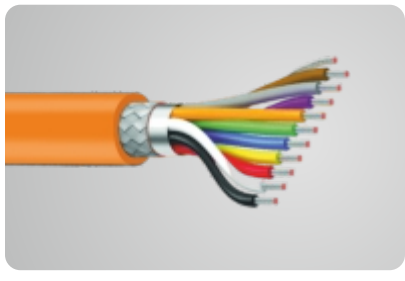
**Single Core Insulated & Sheathed Screened Cable – Thick Wall**



**Multi Core Unscreened Cable – Thin Wall**



**Multi Core Unscreened Cable – Thick Wall**



**Multi Core Screened Cable – Thin Wall**

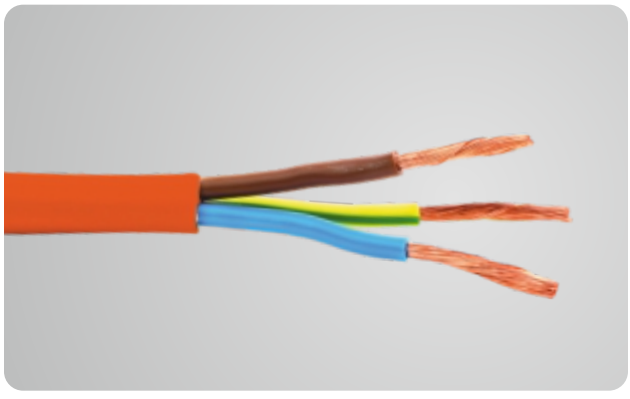
# HIGH TEMPERATURE RESISTANT CABLES

**Svarn high temperature resistant cables are engineered to endure extreme heat conditions while maintaining their electrical and mechanical integrity. Widely utilised in the automotive sector along with industrial, aerospace, and various other applications, these cables ensure reliable performance even in environments with elevated temperatures.**

## Tefheat 250

### PTFE Insulated Cable

Temperature Range: -40°C to +250°C

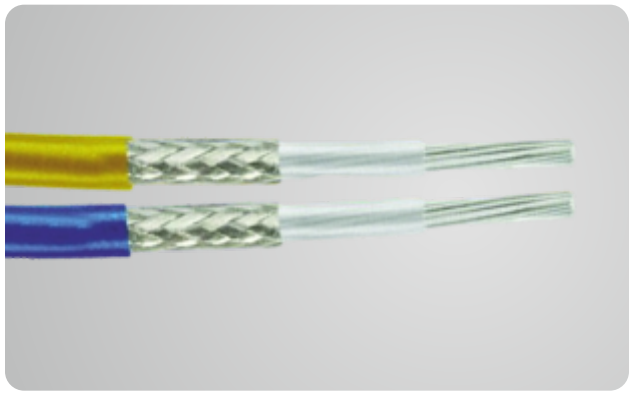


Polytetrafluoroethylene (PTFE) insulated cables are highly regarded for their outstanding electrical, thermal, and chemical resistance. Tefheat 250 PTFE, with an installed cable temperature range between -40°C to +250°C, is a fluoropolymer, that provides excellent insulation properties, making these cables suitable for high-temperature applications. They are commonly used in industries such as aerospace, medical, and communications, where reliability in extreme conditions is crucial.

## Tefheat 200

### ETFE Insulated Cable

Temperature Range: -40°C to +200°C



Ethylene Tetrafluoroethylene (ETFE) insulated cables are known for their exceptional thermal and chemical resistance. Tefheat 200 ETFE, with an installed cable temperature range between -40°C to +200°C, provides robust protection against harsh environmental conditions, making these cables suitable for applications in industries such as aerospace, automotive, and chemical processing.

# CHARGING CABLES (AC & DC)

Svarn offers EV charging cables designed for residential and public charging applications around the globe and has the approvals and certifications relevant to all specific EV market sectors and regulatory requirements worldwide. AC charging cables are frequently employed at home and public charging stations, enabling EVs to draw power from the electrical grid. On the other hand, DC charging cables are essential for fast-charging stations, delivering high-power DC electricity directly to the vehicle's battery, thus enabling faster charging.

### AC Charging Cable (32 Amp)

3x4.0 sqmm + 1x0.5 sqmm,
5x4.0 sqmm + 1x0.5 sqmm,
3x6.0 sqmm + 1x0.5 sqmm,
5x4.0 sqmm + 1x0.5 sqmm

### AC Charging Cable (20 Amp)

3x1.5 sqmm + 1x0.5 sqmm,
5x1.5 sqmm + 1x0.5 sqmm

### DC Charging Cable (40 Amp)

3x6.0 sqmm + 3x2x0.75 sqmm

### DC Charging Cable (80 Amp)

2x35 sqmm + 1x25 sqmm +
3x2x0.75 sqmm

### DC Charging Cable (150 Amp)

2x35 sqmm + 1x25 sqmm +
3x2x0.75 sqmm

### DC Charging Cable (200 Amp)

2x50 sqmm + 1x25 sqmm +
3x2x0.75 sqmm

### DC Charging Cable (250 Amp)

2x70 sqmm + 1x25 sqmm +
3x2x0.75 sqmm

### DC Charging Cable (375 Amp)

4x55 sqmm + 1x25 sqmm +
2x0.75 sqmm + 6x0.5 sqmm

### DC Charging Cable (500 Amp)

5x25 sqmm + 7x0.75 sqmm

# WIRING HARNESS

Wires and harnesses play a crucial role in regulating electronic components and transmitting power and signals throughout a vehicle. Recognising this indispensability, Svarn offers comprehensive wire and harness solutions tailored to various automotive applications, available in both standard configurations and customized designs. Our products are crafted using top-tier materials to ensure exceptional quality, durability, and reliability, perfectly aligned with the requirements of modern vehicles.

LV Wiring

Over Moulded Solutions

Technical Sub Harness

HV Connections

Main Wiring Harness

Battery Cable Assemblies

# QUALITY PAR EXCELLENCE

## IATF 16949:2016

Certificate

Standard: IATF 16949:2016 (1st edition, 2016-10-01)
Certificate Registr. No.: 01 111 2336372
IATF Certificate No.: 0502755

Certificate Holder: SVARN INFRATEL PRIVATE LIMITED
74th Milestone, Delhi Mathura Road, Next to Gulab Public School, Before Hodal Toll Plaza, Mitrol, Palwal, Haryana, 121105 India

IATF USI: LLWLRP
With remote location(s) according to annex

Scope: Manufacture of Wires, Cable & Connecting systems (Wiring Harness Assemblies & Battery Cables)
Excluding Product Design

Proof has been furnished by means of an audit that the requirements of IATF 16949:2016 are met.

Validity: The certificate is valid from 2024-02-27 until 2027-02-26.

Release date: 2024-02-27

TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln
Germany - NRW

2-IAO-QMC 01003

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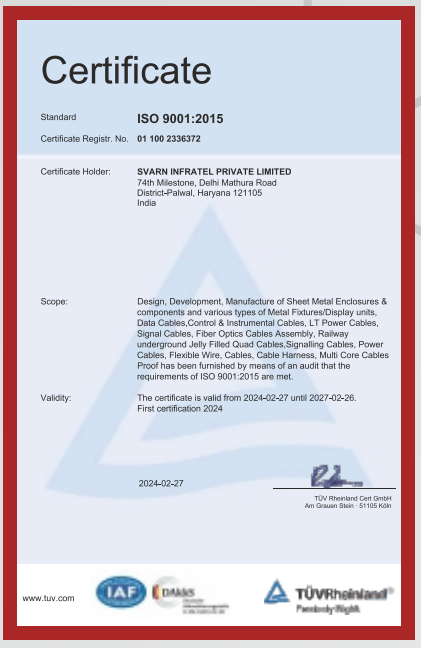
## ISO 9001:2015



Certificate

Standard: ISO 9001:2015
Certificate Registr. No.: 01 100 2336372

Certificate Holder: SVARN INFRATEL PRIVATE LIMITED
74th Milestone, Delhi Mathura Road
District-Palwal, Haryana 121105
India

Scope: Design, Development, Manufacture of Sheet Metal Enclosures & components and various types of Metal Fixtures/Display units, Data Cables,Control & Instrumental Cables, LT Power Cables, Signal Cables, Fiber Optics Cables Assembly, Railway underground Jelly Filled Quad Cables,Signalling Cables, Power Cables, Flexible Wire, Cables, Cable Harness, Multi Core Cables
Proof has been furnished by means of an audit that the requirements of ISO 9001:2015 are met.

Validity: The certificate is valid from 2024-02-27 until 2027-02-26.
First certification 2024

2024-02-27

TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln

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## ISO 45001:2018

Certificate

Standard: ISO 45001:2018
Certificate Registr. No.: 01 213 1836337

Certificate Holder: SVARN INFRATEL PRIVATE LIMITED
74th Milestone, Delhi Mathura Road
District-Palwal, Haryana 121105
India

Scope: **Design, Development, Manufacture of Sheet Metal Enclosures & components and various types of Metal Fixtures/Display units, Data Cables, Control & Instrumental Cables, LT Power Cables, Signal Cables, Fiber Optics Cables Assembly, Railway underground Jelly Filled Quad Cables, Signaling Cables, Power Cables, Flexible Wire, Cables, Cable Harness, Multi Core Cables and Submersible Cables & PVC Compounds.**
Proof has been furnished by means of an audit that the requirements of ISO 45001:2018 are met.

Validity: The certificate is valid from 2021-12-23 until 2024-10-25.
First certification 2018

2021-12-23

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Am Grauen Stein · 51105 Köln

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## ISO 14001:2015

Certificate

Standard: ISO 14001:2015
Certificate Registr. No.: 01 104 1836337

Certificate Holder: SVARN INFRATEL PRIVATE LIMITED
74th Milestone, Delhi Mathura Road
District-Palwal, Haryana 121105
India

Scope: **Design, Development, Manufacture of Sheet Metal Enclosures & components and various types of Metal Fixtures/Display units, Data Cables, Control & Instrumental Cables, LT Power Cables, Signal Cables, Fiber Optics Cables Assembly, Railway underground Jelly Filled Quad Cables, Signaling Cables, Power Cables, Flexible Wire, Cables, Cable Harness, Multi Core Cables and Submersible Cables & PVC Compounds.**
Proof has been furnished by means of an audit that the requirements of ISO 14001:2015 are met.

Validity: The certificate is valid from 2021-12-23 until 2024-10-25.
First certification 2018

2021-12-23

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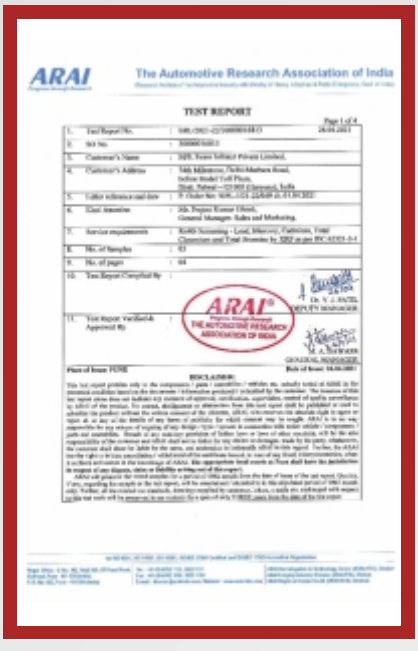
## RoHS Screening



ARAI The Automotive Research Association of India

TEST REPORT

Page 1 of 4

ARAI THE AUTOMOTIVE RESEARCH ASSOCIATION OF INDIA

DISCLAIMER

## ISO 6722-1

ARAI The Automotive Research Association of India

TEST REPORT

ARAI THE AUTOMOTIVE RESEARCH ASSOCIATION OF INDIA

DISCLAIMER

## BHARAT (INDIA)

**CORPORATE OFFICE**
Plot No. 1, Site No. 1, 14/3, Mathura Road,
Faridabad – 121003, Haryana

**WORKS**

**Haryana**
74th Milestone, Delhi-Mathura Road,
Hodal Toll Plaza, Distt. Palwal-121005

**Rajasthan**
Plot No. SP5 – 249, 250, RIICO Industrial Area,
Ghiloth, Neemrana, Alwar – 301705

**Maharashtra**
Gat No. 153/1/1, Village Ambethan, Taluka Khed
(near Dwarka School), Pune – 410501

**Uttarakhand**
Plot No. 68, 69, 71, 72 & 73, Sector-5, IIE,
Sidcul, Haridwar-249403

## ASIA

**SINGAPORE**
**SVARN PTE. LTD.:** 7 Temasek Boulevard, #12-07,
Suntec Tower One, Downtown Core, 038987, Singapore

**THAILAND**
**SVARN INFRA (THAILAND) CO LTD:** 3656/50,
Green Tower Building, Floor 16th, Rama 4 Road,
Klongton Subdistrict, Klongton District, Bangkok 10110

**INDONESIA**
**PT SVARN GROUP INDONESIA:** Innovation Center,
Jababeka Industrial Estate 6, Jl. Samsung,
Block A 3A, Cikarang Utara 17530

**VIETNAM**
**SVARN GROUP LLC:** 12B Floor, Cienco 4 Building,
180 Nguyen Thi Minh Khai, Vo Thi Sau Ward,
District 3, Ho Chi Minh City, Vietnam

**Contact: Paresh Gupta**
M: +91 98107 94010 | E: paresh@svarn.com

## MIDDLE EAST

**DUBAI**
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Dubai South, UAE

**Contact: J.K. Mishra**
M: +971 50118 7209
E: jkmishra@svarn.com