ARIHANT

Arihant स्पर्श Newsletter

A Touch of Excellence, Every Month

OCTOBER 2026



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MESSAGE OF THE MONTH

Clean Spaces, Professional Conduct: A Responsibility We Share



Amit Jain
(Founder)

A workplace is a reflection of the people who work in it. A clean, organised, and respectful environment not only creates a positive impression but also contributes to a more comfortable, productive, and professional workplace.

At Arihant Electricals, maintaining cleanliness and workplace decorum is a responsibility shared by all of us. Small everyday actions, keeping our workstations tidy, disposing of waste in designated bins, maintaining cleanliness in common areas, and using office facilities responsibly, go a long way in keeping our premises welcoming and well-maintained.

Workplace decorum is equally important. Being mindful of noise levels, respecting colleagues and shared spaces, following workplace protocols, and taking care of company property are simple ways of demonstrating professionalism in our daily interactions.

Let us remember that maintaining our workplace is not just about following rules; it is about showing consideration for the people around us and taking pride in the space we share.

A clean space reflects our discipline.
Respectful conduct reflects our culture.
Together, they help create a workplace we can all be proud of.

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SPOTLIGHT OF THE MONTH

Featured Articles

Dive into this month's insightful articles, covering industry trends, innovations, and expert perspectives. Stay informed, stay inspired, and explore ideas that drive excellence at Arihant Electricals.

1

Supercapacitors: Powering the Future of Energy



Sandeep Tripathi
(Dept: Sales-Lighting Division)

1. What is a Supercapacitor?

A supercapacitor, also called an ultracapacitor, is an energystorage device that stores and releases electrical energy much faster than a conventional battery. It consists mainly of two electrodes, an electrolyte and a separator.

Unlike a battery, which is mainly designed for storing energy for a longer duration, a supercapacitor is designed to deliver high power very quickly. Because of its rapid charging and discharging ability, it can be used whenever electronic systems need a quick burst of energy.

2. Benefits of Supercapacitors

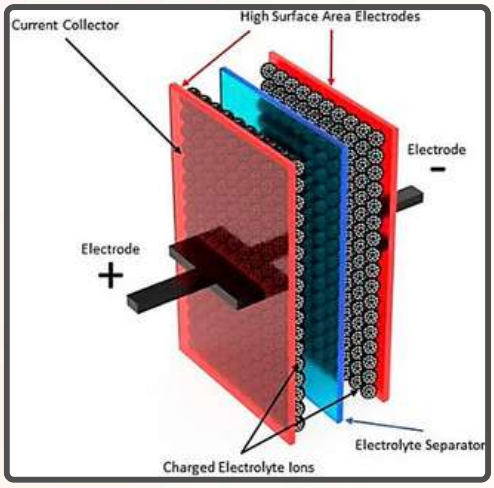
- Very fast charging and discharging compared with batteries.
- Long life cycle - they can withstand hundreds of thousands to millions of charge/discharge cycles.
- High power output, useful when a product needs a sudden burst of energy.
- Good performance in frequent charging applications.
- Lower maintenance and generally safer than many battery chemistries.
- Can work together with batteries to reduce battery stress and extend battery life.

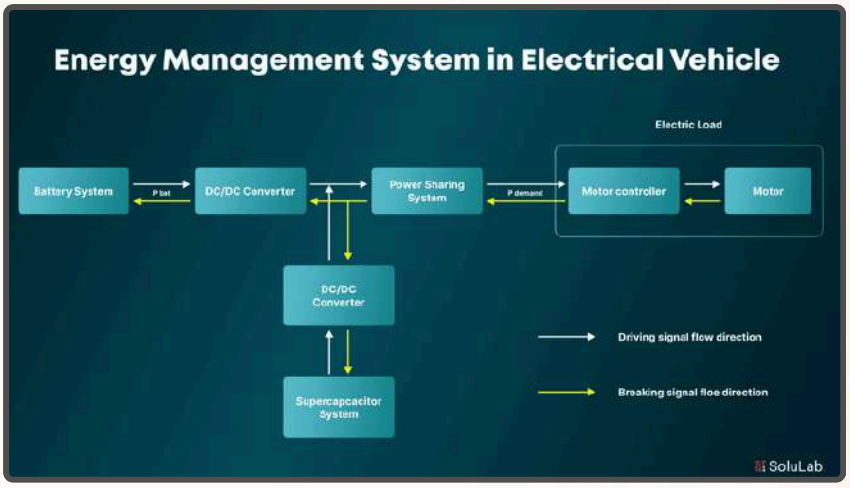
3. Demerits of Supercapacitors

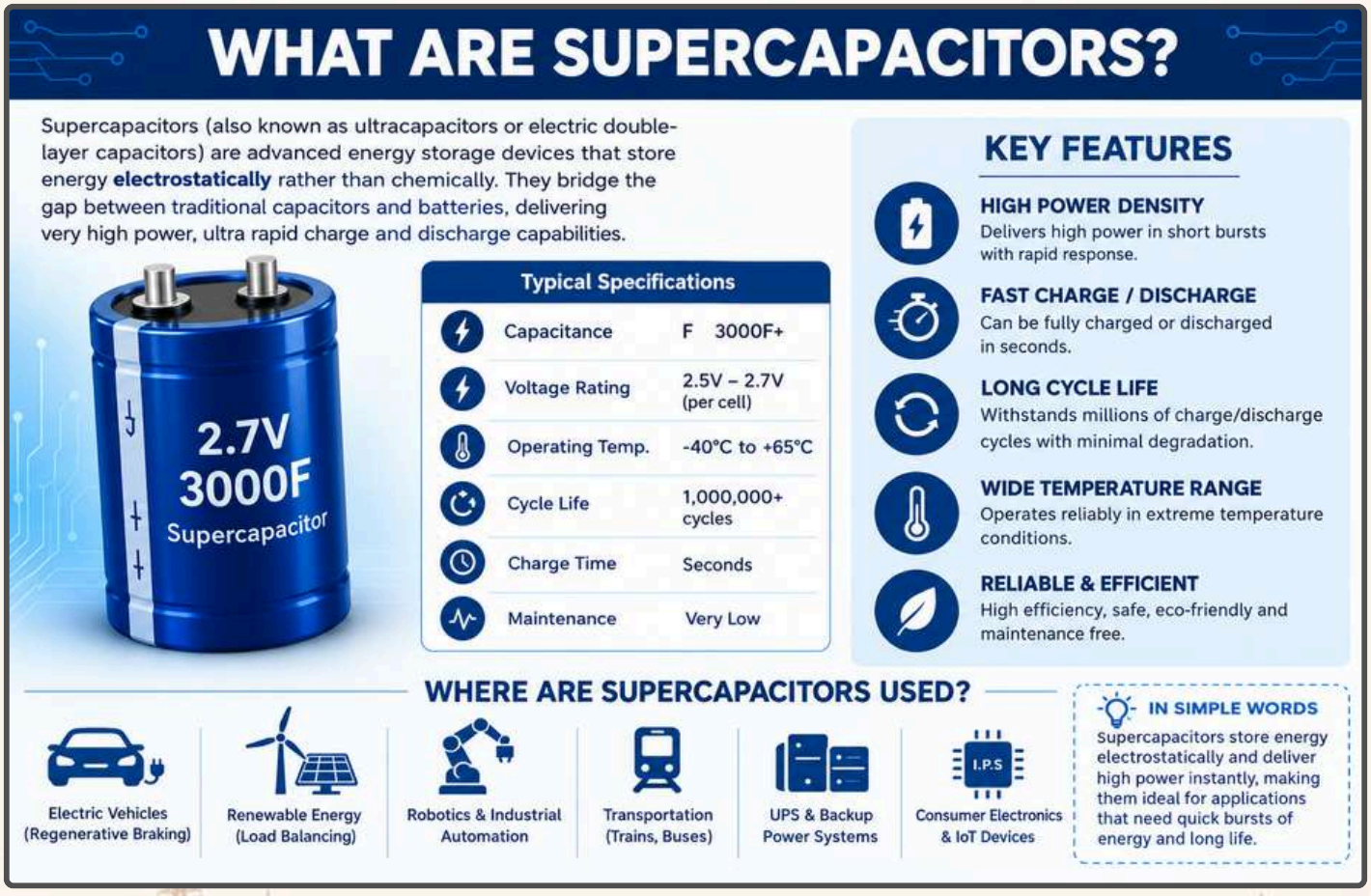
- Lower energy storage than conventional batteries, so they cannot usually power a device for as long.
- Higher cost for some applications.
- They have a relatively high self-discharge rate.
- Voltage decreases as the supercapacitor discharges, so electronic systems may need voltage regulation.
- For long-duration energy storage, batteries are generally better.

4. Future Uses: From Electric Vehicles to AI

Supercapacitors have significant potential in future technologies. In electric vehicles, they can provide extra power during rapid acceleration and quickly capture energy generated during regenerative braking. In buses and trains, they can support fast charging and repeated energy recovery. Supercapacitors can also contribute to the growing world of Artificial Intelligence (AI). AI systems depend on powerful computing hardware, including GPUs, data centres and edge-AI devices, which can experience sudden changes or peaks in power demand.







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2

Application Spotlight: Inverter Technology

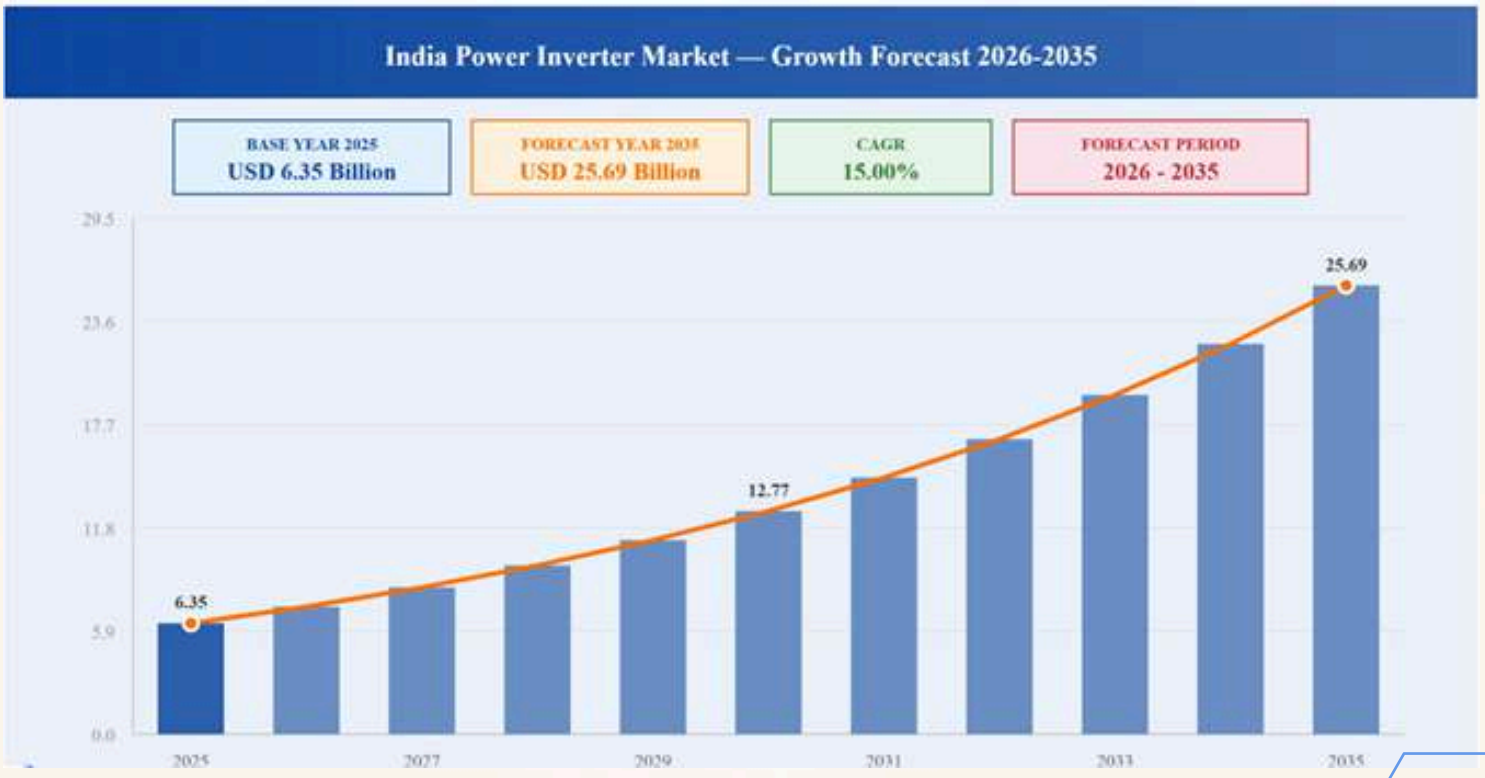


Shivam Jaiswal
(Dept: Marketing Division)

Market Size & Forecast

India's inverter market is valued at approximately USD 1.4 to 1.6 billion and is growing at a compound annual growth rate (CAGR) of 11% to 18%.

- **Market Size in (2025):** USD 6.35 Billion
- **Projected Market Size in (2035):** USD 25.69 Billion
- **Compound Annual Growth Rate (CAGR) (2026-2035):** 15.00%
- Segments: Utility-scale projects command the largest volume share, but residential arrays represent the fastest-growing sector.
- **Technology Shift:** String and hybrid inverters are gaining rapid traction due to consumer demand for reliable backup and energy storage, while central inverters dominate multi-gigawatt solar parks.



Key Growth Drivers

Government Schemes: Programs like the **PM Surya Ghar Muft Bijli Yojana** and **PM-KUSUM** are accelerating residential rooftop and solar water pump installations.

- Energy Independence: Rising electricity costs and power reliability concerns encourage both urban and rural users to adopt solar-plus-storage and hybrid solutions.
- Regulatory Focus: Compliance policies like the Approved List of Models and Manufacturers (ALMM) increasingly favour locally tested and certified hardware.

Major Market Players

- **Global & Industrial Brands:** Sungrow, Huawei, Sineng Electric, TBEA, Solis (Ginlong Technologies), SMA, and Schneider Electric.
- **Domestic Household Brands:** Luminous, Microtek, Tata Power Solar, and Vikram Solar, Okaya Batteries, etc..

What is an Inverter?

- **Core Function:** Converts Direct Current (DC) electricity into Alternating Current (AC) electricity.
- **The Reason:** Solar panels and batteries produce DC power, but most household appliances and the utility grid operate on AC power.
- **Evolution:** Inverters have evolved from basic standalone units into highly intelligent, grid-interactive, and battery-managing devices.

1. Standard / Standalone Inverter

The Basic Off-Grid Inverter-

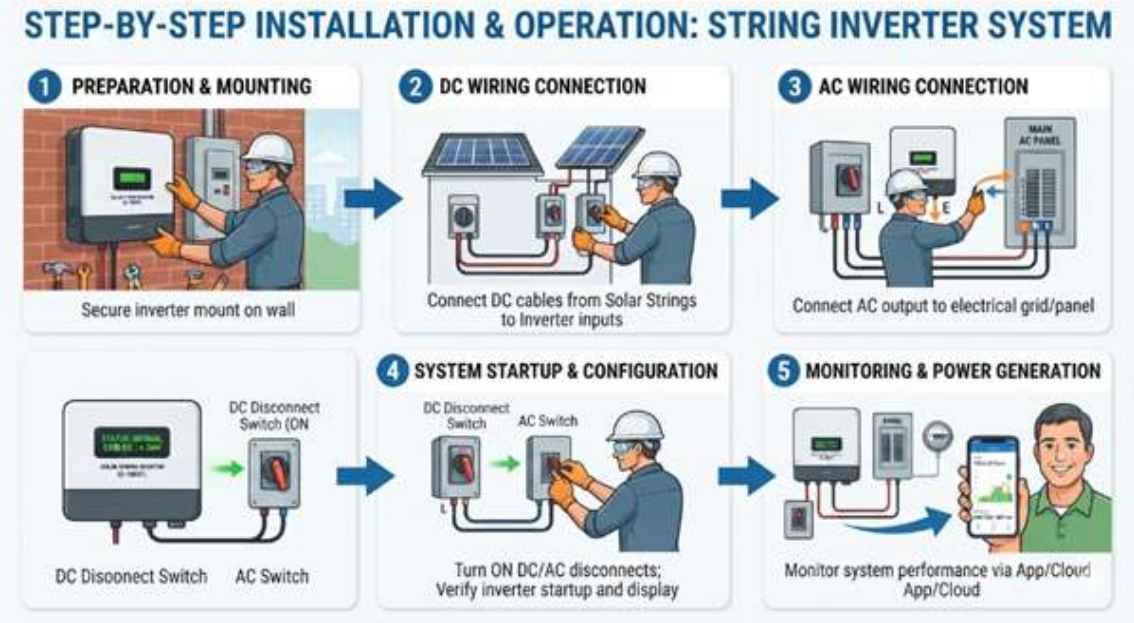
- **Definition:** A traditional inverter designed to work purely with a battery bank in an off-grid environment.
- **How it Works:** Draws DC power directly from a battery bank and converts it to AC power for local consumption.
- **Grid Connection:** Completely isolated; it cannot connect to or feed energy back into the utility grid.
- **Best Used For:** Remote cabins, RVs, boats, or areas with absolutely no utility grid infrastructure.



2. String Inverter

The Efficient Modular Solution-

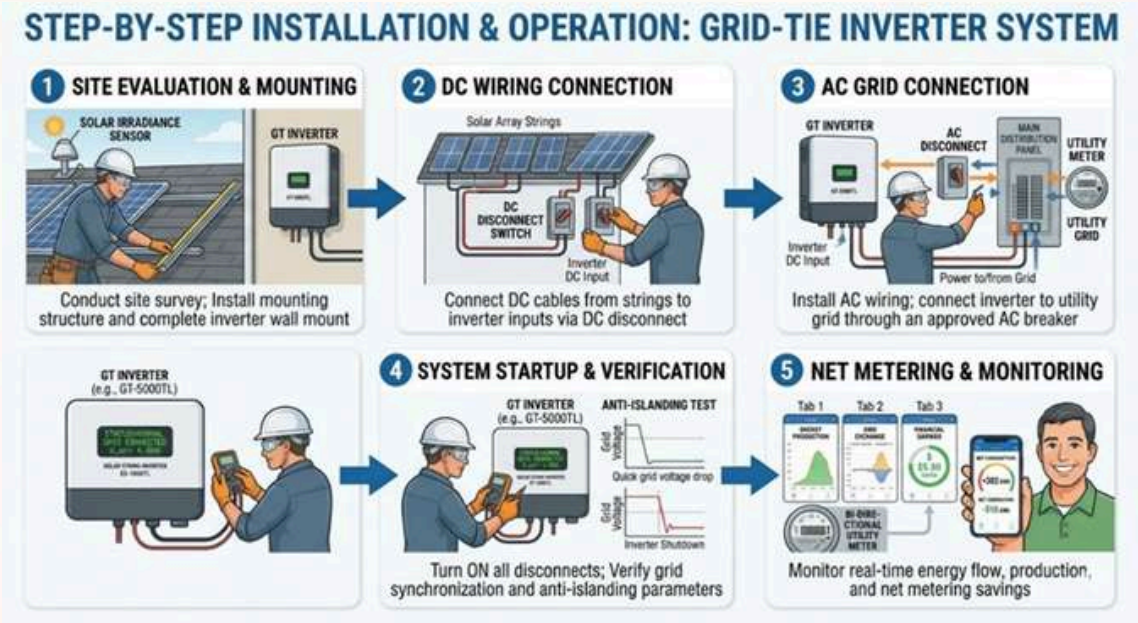
- **Definition:** A component-level inverter where multiple solar panels are wired together in series (a "string") into a single central unit.
- **How it Works:** It combines the collective high-voltage DC power from the entire string and converts it to AC.
- **Limitation: P**erformance depends on the weakest link. If shade covers one panel, the power output of the entire string drops significantly.
- **Best Used For:** Residential or commercial rooftops with uniform, unshaded layouts.



3. Grid-Tied (GT) Inverter

The Grid-Synchronised Solution-

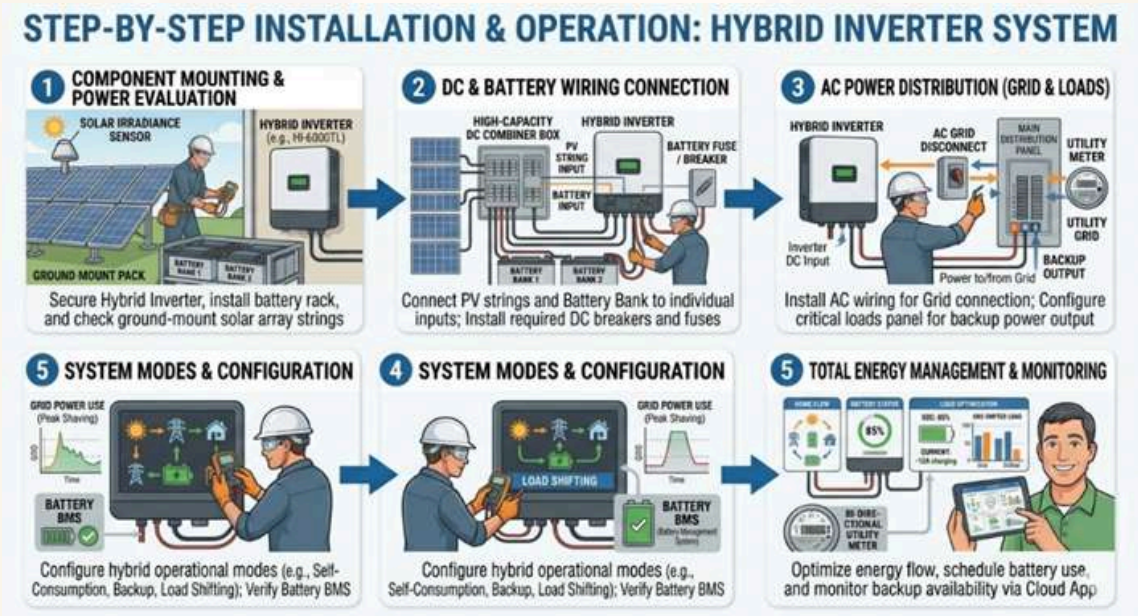
- **Definition:** An inverter explicitly built to safely interface and synchronise with the public utility grid.
- **How it Works:** Converts solar DC power to AC and instantly sends it to your appliances or pushes excess energy back to the grid (Net Metering).
- **Safety Feature (Anti-Islanding):** It shuts down completely during a power outage to prevent back-feeding electricity, ensuring utility workers aren't electrocuted.
- **Best Used For:** Homes and businesses looking to reduce electricity bills in areas with highly reliable grids.



4. Hybrid Inverter

The Intelligent Multi-Mode Solution-

- **Definition:** An all-in-one unit that integrates a solar inverter, battery charge controller, and grid-tie function.
- **How it Works:** Seamlessly manages power inputs from solar panels, batteries, and the utility grid simultaneously**.**
- **Key Advantage:** Unlike standard GT or string inverters, a hybrid inverter keeps running during a grid outage by switching to battery backup within milliseconds.
- **Best Used For:** Areas prone to blackouts or locations targeting self-sufficiency and time-of-use tariff optimization.



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3

Learning the Objective of Life

The Path to a Disciplined Life, Positive Mindset, and Lasting Success



Mr. Rajdeep
(Dept: Marketing)

In today's fast-paced world, people often focus on achieving professional success while overlooking the true purpose of life. Success is not merely measured by wealth, position, or recognition. The real objective of life is to continuously grow as a better human being, maintain good health, develop a positive mindset, and contribute to the well-being of others.

Understanding the Objective of Life

Life is a journey of learning, self-improvement, and service. Every individual has unique talents and abilities that can be used to create value for society. A meaningful life is one in which we strive to improve ourselves while helping others lead happier and healthier lives. When our actions are aligned with positive values, we experience greater satisfaction, peace, and fulfilment.

The Importance of Discipline

Discipline is the foundation of a successful life. It is the ability to consistently do what is right, even when it is difficult. A disciplined person manages time effectively, maintains healthy habits, and remains focused on long-term goals.

Simple practices such as waking up early, exercising regularly, eating nutritious food, and following a daily routine can bring remarkable improvements in both personal and professional life. Discipline helps us overcome distractions and builds the confidence needed to achieve our goals.

Building a Positive Mindset

Our thoughts shape our reality. A positive mindset enables us to face challenges with courage and resilience. Instead of focusing on problems, positive thinkers focus on solutions and opportunities.

Some effective ways to cultivate a positive mindset include:

- Practicing gratitude every day.
- Surrounding yourself with optimistic people.
- Learning from failures rather than fearing them.
- Maintaining a healthy work-life balance.
- Engaging in continuous learning and self-development.

A positive attitude not only improves mental health but also enhances productivity, relationships, and overall happiness.

Healthy Body, Healthy Mind, Healthy Soul

The connection between body, mind, and soul is essential for a balanced life.

Healthy Body
Regular physical activity, proper nutrition, adequate sleep, and hydration help maintain physical fitness and energy levels. A healthy body improves concentration, efficiency, and overall quality of life.

Healthy Mind
Mental well-being is equally important. Reading, learning new skills, managing stress, and maintaining meaningful relationships contribute to a healthy and focused mind.

Healthy Soul
Inner peace comes from living with purpose, honesty, compassion, and gratitude. Activities such as meditation, mindfulness, prayer, or spending time in nature can nourish the soul and create a sense of fulfillment.

Success Through Balance
True success is achieved when professional achievements are complemented by physical health, mental strength, and emotional well-being. A balanced life enables us to perform better, make wiser decisions, and inspire those around us.

Success is not a destination but a journey of continuous growth and contribution. When we maintain discipline, cultivate positivity, and care for our body, mind, and soul, we become capable of achieving our goals while making a positive impact on society.

The bottom line is that the ultimate objective of life is not only to succeed personally but also to become a source of inspiration and support for others. By living a disciplined life, developing a positive mindset, and maintaining a healthy body and soul, we can unlock our full potential and enjoy a meaningful, fulfilling, and successful life.

Remember, a healthy body fuels productivity, a positive mind drives success, and a disciplined life creates lasting happiness.

4

Understanding PID Control: The Brain Behind Stable Control System



Miss Nandini Bhardwaj
(Dept: R&D)

Introduction

Whether you're charging your smartphone, driving an electric vehicle, or using an air conditioner, chances are a PID controller is working behind the scenes to keep the system operating smoothly. PID, which stands for Proportional-Integral-Derivative, is one of the most widely used control algorithms in engineering. Despite its technical name, the basic idea is simple: it continuously monitors a system, compares the desired output with the actual output, and makes adjustments to minimize the difference.

What is PID Control?

Imagine you're driving a car and want to maintain a speed of **60 km/h.**

- If your speed drops to **55 km/h**, you press the accelerator.
- If your speed rises to **65 km/h**, you ease off the accelerator.
- As your speed approaches **60 km/h**, you make smaller and smoother adjustments.

This is exactly how a PID controller works. It constantly checks the error between the desired value (called the **setpoint**) and the actual value, then calculates the appropriate correction to keep the system stable and accurate.

The Three Parts of PID

1. Proportional (P)

The **Proportional** part reacts to the current error. The larger the error, the stronger the correction.

Example:

If a room is much colder than the desired temperature, the heater turns on with more power. As the room warms up, the heating power is gradually reduced.

2. Integral (I)

The **Integral** part looks at the accumulated error over time. If the system has been slightly below the target for a while, it applies an additional correction to eliminate that persistent error.

Example:

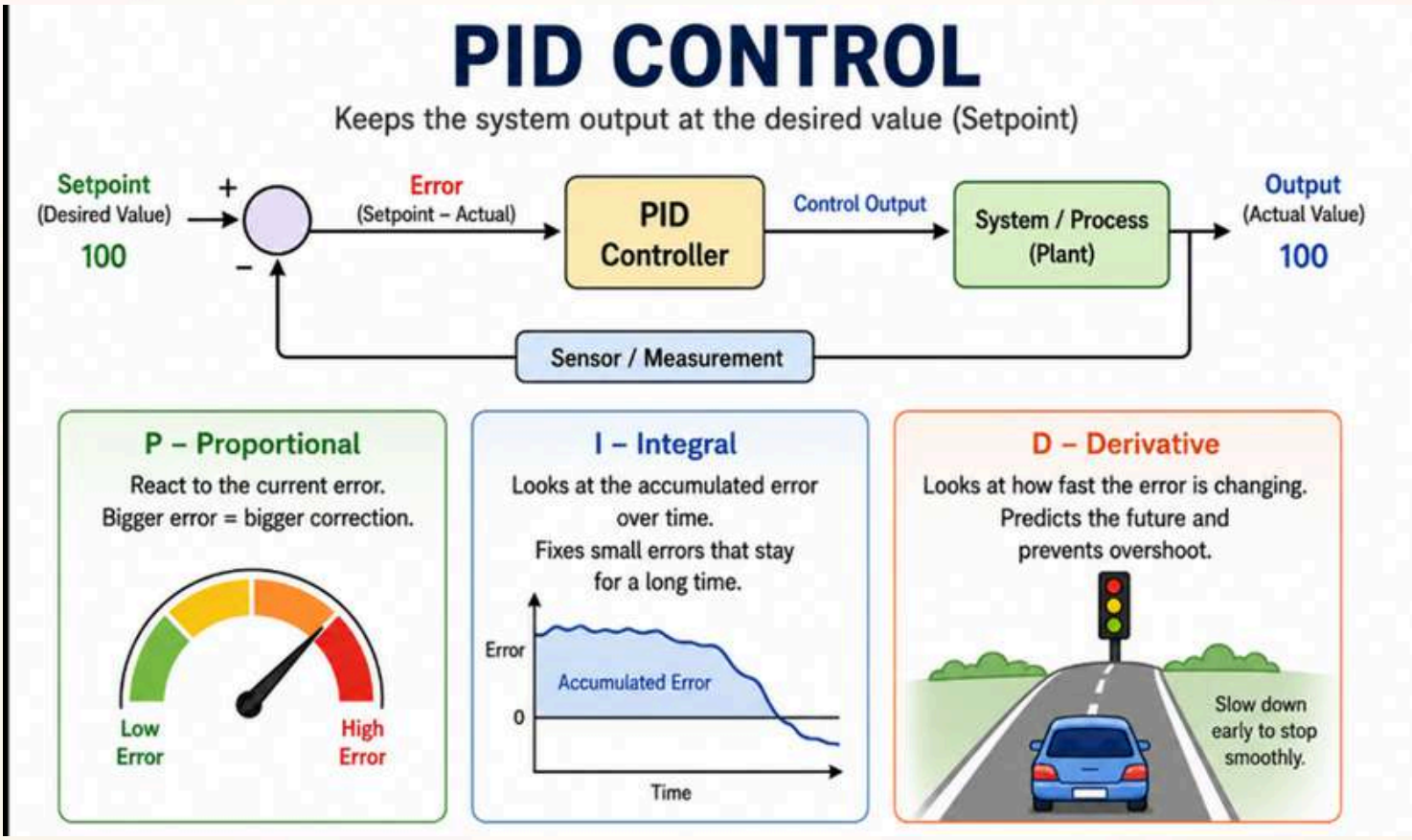
If a battery charger consistently delivers a voltage slightly lower than the target, the integral action slowly increases the output until the desired voltage is reached.

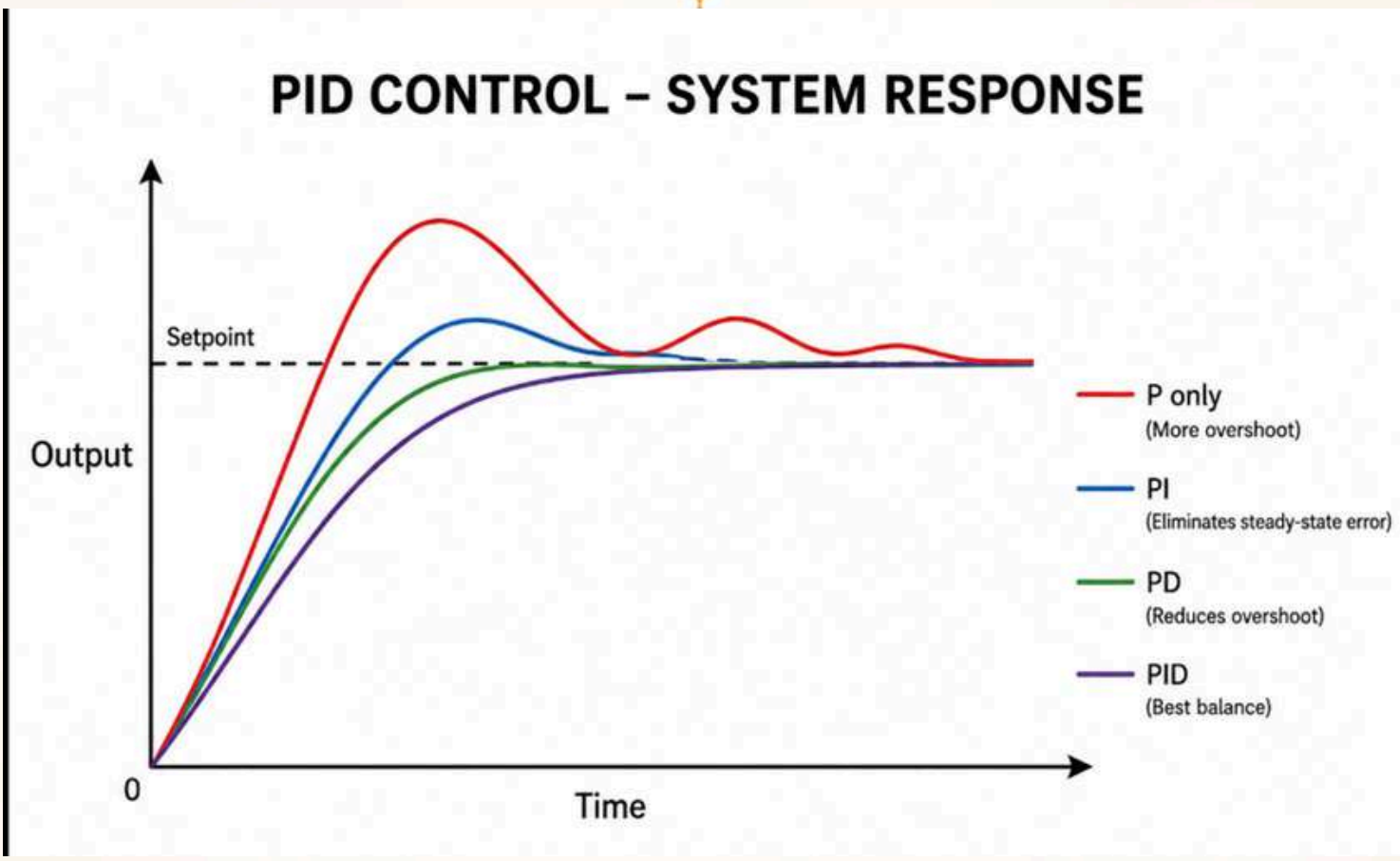
3. Derivative (D)

The **Derivative** part predicts how the error is changing and acts to prevent overshoot or oscillations. It helps the system settle smoothly at the target value.

Example:

When driving toward a traffic signal, you don't wait until the last moment to brake. Instead, you begin slowing down gradually based on how quickly you're approaching the stop line. The derivative action works in a similar way.





Applications of PID Control

PID control is used in countless systems where maintaining a desired value is important. Some common applications include:

- **Power Electronics:** Regulating the output voltage and current of DC-DC converters, inverters, and battery chargers.
- **Motor Control:** Maintaining motor speed, position, or torque in robotics, conveyors, and electric vehicles.
- **Temperature Control:** Controlling ovens, furnaces, air conditioners, refrigerators, and industrial heating systems.
- **Automotive Systems:** Cruise control, electric power steering, and engine management.
- **Industrial Automation:** Pressure, flow, and level control in manufacturing plants and process industries.

Conclusion

PID control is one of the most widely used control techniques in engineering because it balances simplicity with excellent performance. By continuously monitoring and correcting system behavior, it helps maintain stable, accurate, and efficient operation across a wide range of applications. Understanding the basic concept of PID provides a solid foundation for anyone interested in embedded systems, power electronics, or industrial automation.

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EVENTS AND CONFERENCES

1. Arihant Electricals at INNOPROM India 2026

Arihant Electricals participated in INNOPROM India 2026 at Bharat Mandapam, New Delhi, engaging with leading Indian and Russian industries. The event provided opportunities to explore emerging technologies, localisation, and potential collaborations across railways, energy, infrastructure, and advanced engineering.







click here!

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2. Arihant Electricals at SEMICON India

Arihant Electricals at SEMICON India, connecting with industry leaders and exploring the latest developments across the semiconductor and electronics ecosystem. A valuable platform for knowledge exchange, networking, and strengthening industry connections.





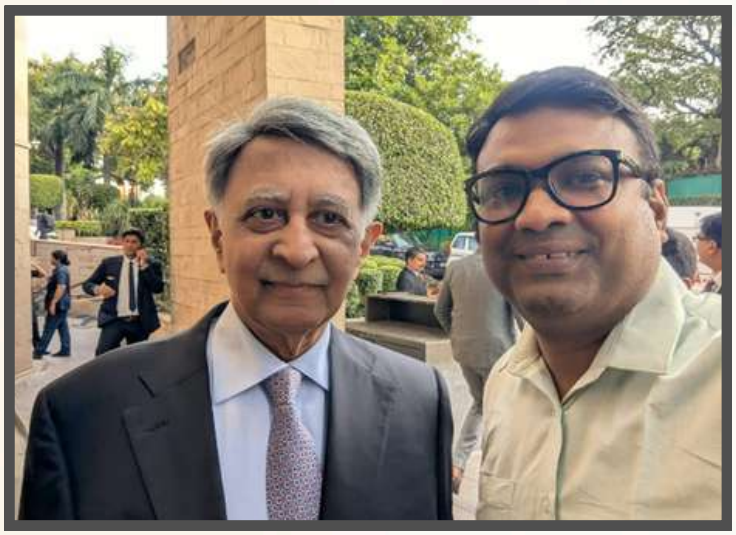
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3. Arihant Electricals at India–Belgium Defence CEO's Roundtable

Arihant Electricals participated in the **India–Belgium Defence CEO's Roundtable and B2B Meeting**, engaging with key industry leaders and exploring opportunities for collaboration across the defence and technology ecosystem.









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4. Arihant Electricals at Indo-Russian Exhibition

Arihant Electricals participated in the **Indo-Russian Exhibition**, engaging with industry professionals and exploring opportunities for collaboration, innovation, and growth across the defence and technology sectors.









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5. Ganesh Chaturthi Puja Celebration

Arihant Electricals celebrated **Ganesh Chaturthi** with devotion and togetherness, seeking the blessings of **Lord Ganesha** for prosperity, success, and new beginnings.





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6. Vishwakarma Puja Celebration

Arihant Electricals celebrated **Vishwakarma Puja** with devotion and gratitude, honouring Lord Vishwakarma and seeking blessings for **progress, prosperity, and continued excellence.**













7. Celebrating Janmashtami

Janmashtami, marking the birth of Lord Krishna, is a celebration of faith, wisdom, and the triumph of righteousness.

At **Arihant Electricals**, we celebrate this auspicious occasion by reflecting on the timeless values of **integrity, perseverance, courage, and purposeful action** that Lord Krishna's teachings continue to inspire.









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8. New Hydraulic Pneumatic Power Press

Arihant Electricals has added a new Hydraulic Pneumatic Power Press to enhance manufacturing efficiency, precision, and productivity. This addition further strengthens our commitment to advanced technology and quality-driven manufacturing.







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September Birthday Celebrations

Celebrating our incredible team members and wishing them joy, success and prosperity!

Birthday celebration of Mr. Ravinder Singh









Birthday celebration of Mr. Ganesh Yadav





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Upcoming October Birthdays

Wishing you joy, success, and a fantastic year ahead!

Sarvesh Tiwari	October 2, 2026
Rahul Kumar Shukla	October 2, 2026
Jaynandan Pandit	October 5, 2026
Shivam Srivastava	October 6, 2026
Sarvender Sagar	October 6, 2026
Panna Lal	October 8, 2026
Mayank Saini	October 8, 2026
Manish Kumar R&D	October 8, 2026
Preeti Chaudhary	October 10, 2026
Vijat Dixit	October 11, 2026
Prasad Devayya Bale	October 14, 2026
Ashutosh	October 21, 2026
Shailendra Singh Bhadoria	October 24, 2026
Abubhav Nath Pandey	October 25, 2026

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Welcome Aboard (New Joinees - September 2026)

Excited to have new talents join the Arihant family as we grow together!



Rati Srivastava
Manager HR



Ravi Shekhar
Manager Production

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Arihant Work Horoscope

Sales Team:



You will promise something ambitious this week.

Production Team:



You will hear the word ***urgent*** 17 times.

Engineering Team:



Someone will say, "Just a quick change."

Quality Team:



You will reject something and become the villain.

Everyone:



Tea will solve at least **60%** of problems.

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FUN & BRAIN TEASERS CORNER

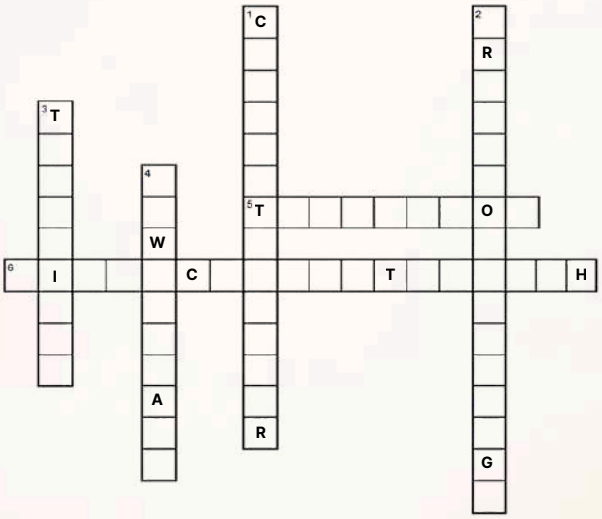
Crossword Puzzle

Get ready to kick-start the year with a little thinking and a lot of fun! This month's **Crossword Puzzle** is designed to challenge your knowledge of electrical systems, engineering basics, and the industries Arihant Electricals proudly serves. Put on your thinking caps, solve the clues, and share your answers with the **HR Head**.

The first three correct entries will be featured in our October edition. Don't miss this chance to test your brain and enjoy some friendly competition!

DOWN

1. A device used to detect and protect electrical equipment from excessive current caused by a short circuit or overload. (14 Letters)
2. The maximum voltage that an insulating material can withstand before dielectric breakdown occurs. (16 Letters)
3. The unwanted electrical disturbance caused by rapid changes in voltage or current within a power system. (9 Letters)
4. A power semiconductor device consisting of multiple thyristor or diode chips connected in a single assembly for high-power applications. (10 Letters)





ACROSS

5. A semiconductor device that controls the flow of current by using a gate terminal and is widely used in controlled rectification. (9 Letters)
6. The ability of an electrical insulation system to withstand a high voltage without electrical breakdown. (18 Letters)

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September Crossword Puzzle Winner Announcement



Anubhav Pandey



Pankaj Kumar

Puzzle Answers from Our Last Edition



Note: The winners were selected according to the quickest response time.

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LITTLE CREATORS' CORNER

This corner is for our Employee's Kids.

A fun-filled space to learn, play, and explore the exciting world of electricity!

Match each electrical item with its correct use and discover how different components help power our homes, cities, railways, and industries. Just use your thinking skills, curiosity, and imagination to find the right pairs!

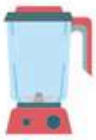
- **Parents can help younger children complete the activity and share their answers with the HR team.**
- **Some smart little electrical explorers may get featured in the next Arihant Newsletter!**

Ready... set... MATCH!



1. Match the Correct Pair – Power Up Your Knowledge

Learning can be fun when you play along! Match the electrical item on the left with its correct use on the right. Can you get them all right?

(A) Electrical Item	(B) What It Does
 Television	Helps wash clothes
 Refrigerator	Heats food quickly
 Mixer	Shows pictures and videos
 Iron	Helps blend or mix food
 Microwave	Helps remove wrinkles from clothes
 Washing Machine	Keeps food cold

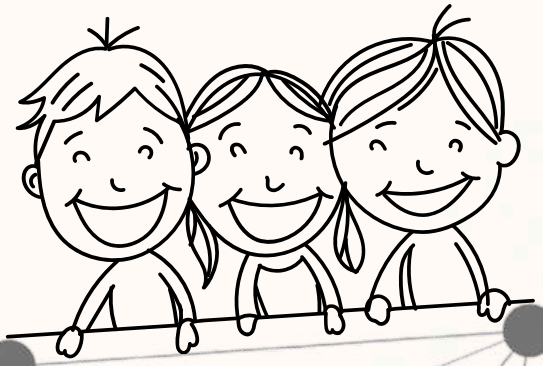
How many did you get right?
Match them all and become a little **Gadget Expert!**

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2. Connect the Dots and Guess the object

- Complete the picture and share it with the HR team.
- Selected entries may be featured in the next Arihant Newsletter!

Ready...Set...CONNECT!



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CHILD NAME & AGE

_____

EMPLOYEE NAME

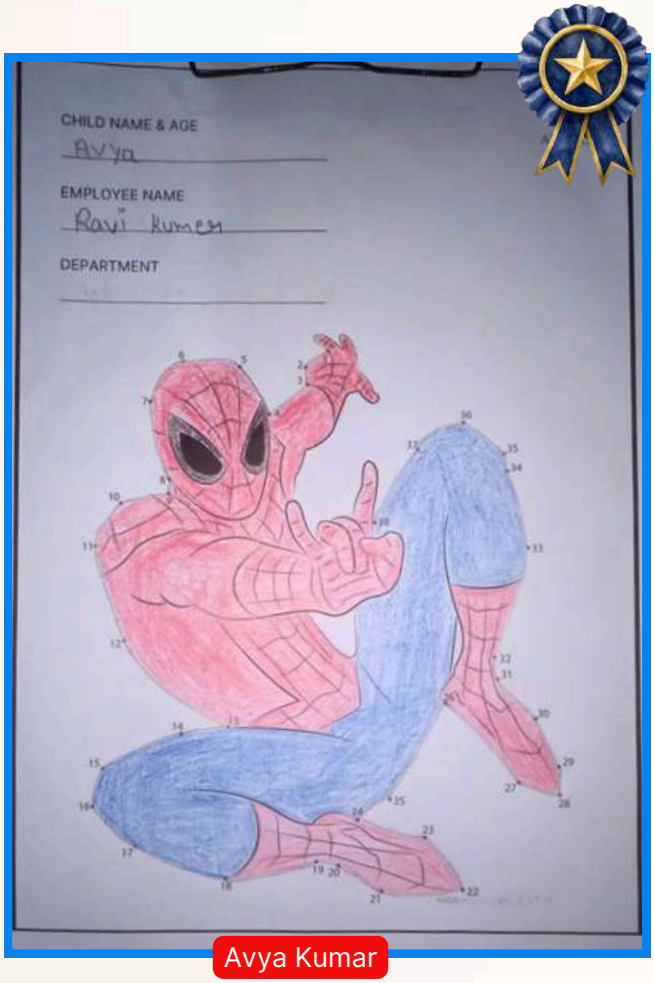
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DEPARTMENT

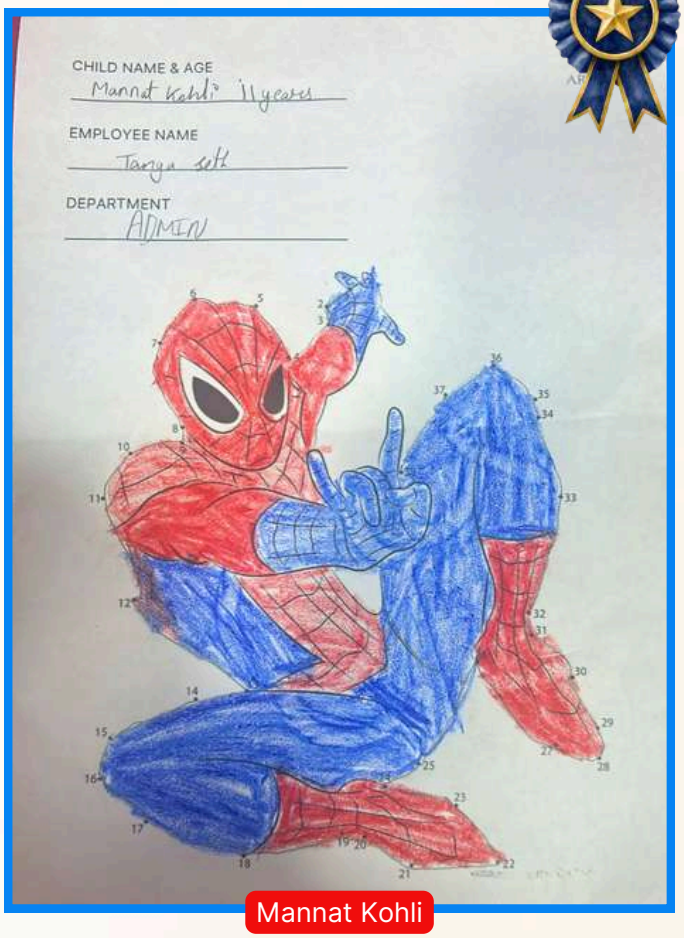
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Showcasing Our Employee's Young Star



Avya Kumar



Mannat Kohli

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A LITTLE BETTER, EVERY DAY

Personal growth doesn't always mean making big changes. Sometimes, it's about small shifts in the way we think, work, communicate and take care of ourselves.

This space brings you simple, relatable ideas, conversations and stories to help you pause, reflect and grow, one step at a time. Watch, listen, reflect and take away something that stays with you:



Click here





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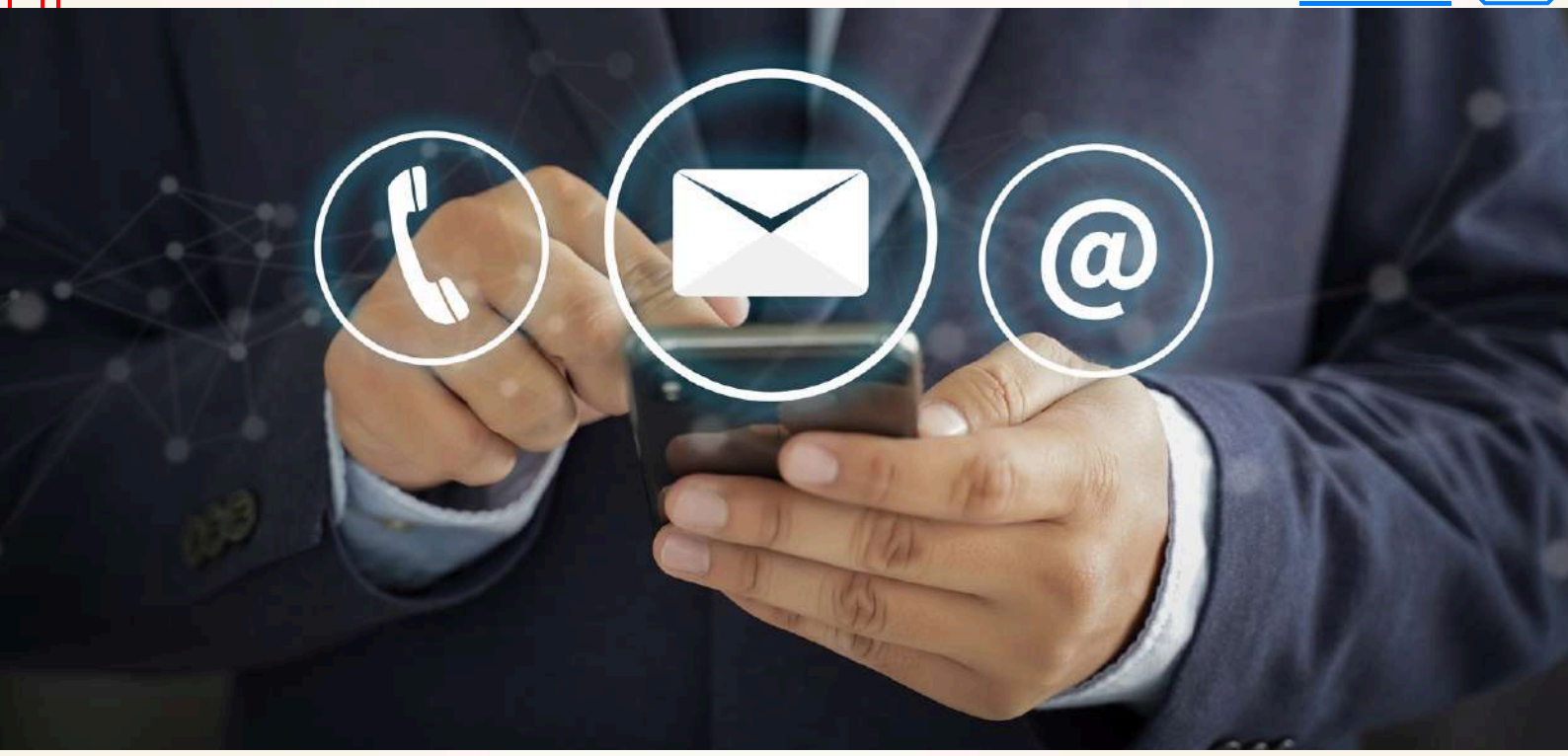
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We solicit your valuable suggestions and feedback to enhance this newsletter for future editions. You can share your thoughts and suggestions by writing to us at: hrd@arihantelectricals.com

1. Match the Correct Pair – Power Up Your Knowledge

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 Microwave	Helps remove wrinkles from clothes
 Washing Machine	Keeps food cold

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2. String Inverter

The Efficient Modular Solution-

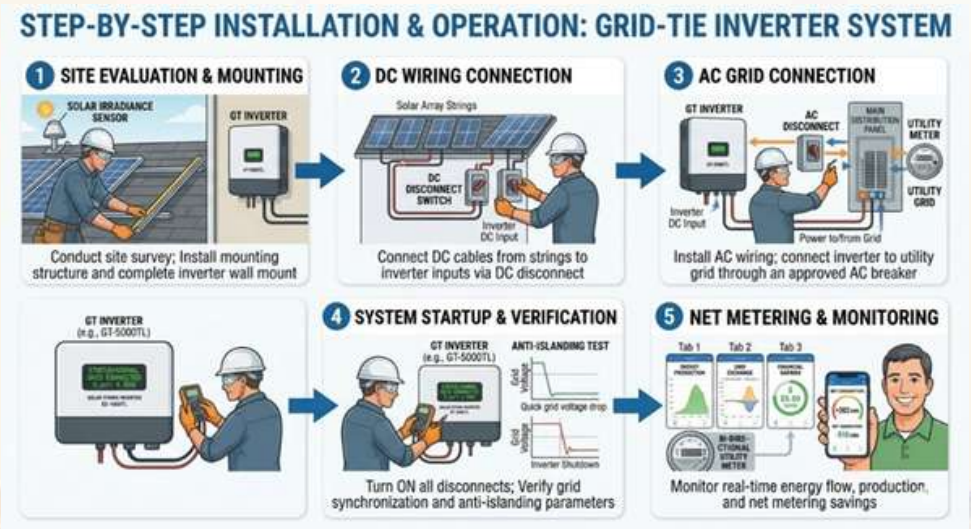
- **Definition:** A component-level inverter where multiple solar panels are wired together in series (a "string") into a single central unit.
- **How it Works:** It combines the collective high-voltage DC power from the entire string and converts it to AC.
- **Limitation: P**erformance depends on the weakest link. If shade covers one panel, the power output of the entire string drops significantly.
- **Best Used For:** Residential or commercial rooftops with uniform, unshaded layouts.



3. Grid-Tied (GT) Inverter

The Grid-Synchronised Solution-

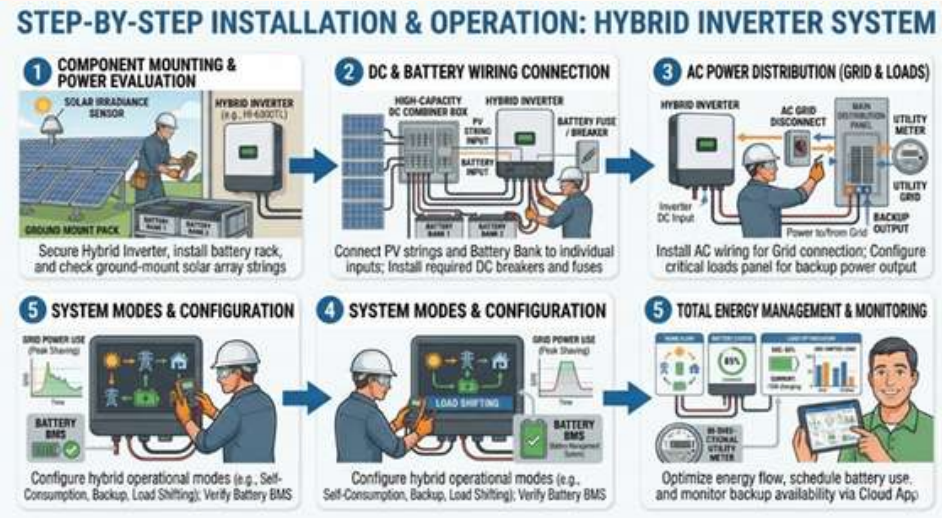
- **Definition:** An inverter explicitly built to safely interface and synchronise with the public utility grid.
- **How it Works:** Converts solar DC power to AC and instantly sends it to your appliances or pushes excess energy back to the grid (Net Metering).
- **Safety Feature (Anti-Islanding):** It shuts down completely during a power outage to prevent back-feeding electricity, ensuring utility workers aren't electrocuted.
- **Best Used For:** Homes and businesses looking to reduce electricity bills in areas with highly reliable grids.



4. Hybrid Inverter

The Intelligent Multi-Mode Solution-

- **Definition:** An all-in-one unit that integrates a solar inverter, battery charge controller, and grid-tie function.
- **How it Works:** Seamlessly manages power inputs from solar panels, batteries, and the utility grid simultaneously.
- **Key Advantage:** Unlike standard GT or string inverters, a hybrid inverter keeps running during a grid outage by switching to battery backup within milliseconds.
- **Best Used For:** Areas prone to blackouts or locations targeting self-sufficiency and time-of-use tariff optimization.



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