



PANEL LINE FACTORY

کارگهی په نال لاین بو دروستکردنی بو رد و کیوسکی کاره بایی
معمل بنال لاین لصناعة البوردات والکیوسکات الکهربائیة



PANEL LINE FACTORY

کارگهی په نال لاین
معمل بنال لاین

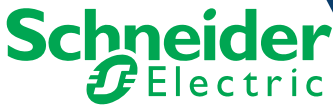
Qualified panel builder
by
Schneider
Electric

www.pl-kiosks.com

info@pl-kiosks.com

+964 750 452 1407

Qualified Panel Builder of :



PANEL LINE FACTORY



COMPANY PRESENTATION

PANEL LINE FACTORY

- **Has been founded** early 1992, and since then it has positioned as one of the leader Panel Builder and Electrical Kiosks & Enclosure Manufacturer companies in the region.
- **Our Facility** is the only one has Certification as Qualified Panel Builder of Schneider Electric Company in North Region of Iraq.
- **We are** high-quality panel builder, which has been providing design and assembly of almost all types of electrical panels, for residential and industrial sectors In Iraq, for over 25 years.
- **Our Valuable Experience** is a result for the increased demand of the region market for new Modernized technical integrated solutions for its various industries and professional Business sectors.
- **Our Company** is the Only & First Panel Builder in North Region of Iraq Certified for ISO 9001:2015, Management System from:
UNIVERSAL REGISTRARS, The certificate is for the following ranges:
Manufacturing of Electrical Panels and Kiosks.
- **We are** represents reputable international companies including but not limited to : Schneider Electric, Phoenix Contact, Tempa Pano and others.
- **Our FACTORY** is a trading and engineering specialized in the filed of Panel Building, and Manufacturing Kiosks& Enclosures
- **The Current Position of our FACTORY**, is far ahead of all its competitors in Kurdistan region as a panel builder, in addition to that, it is a specialized trading company
- **One of the most our Goals** is helps Clients of technology do their business better by leveraging new and creative ways to add value to their business process.

Qualified Panel Builder of :



PANEL LINE FACTORY



Our Message

“ PANEL LINE FACTORY connects people, in business and industry, to real-time Technology in ways that improve business strategies and decisions.„

Our Mission

We deliver high quality panels relying on our long experience and by using the top quality products that are sourced from our international partners

Our Vision

To be at the top among the panel builders sector in Iraq.

Our Values

- » Teamwork Spirit.
- » Close Customer Relationship.
- » Customer Satisfaction.
- » Distinctive Knowledge.
- » Excellent Job Execution.
- » First-class Planning.
- » Continuous Development.
- » Re-evaluation

Our Team



PANEL LINE FACTORY team is a group of young, dynamic and highly motivated Professionals. We combine excellence with top quality, integrity and timeliness to deliver a service that is technically state-of-the-art, designed to facilitate your user experience and cutting edge in terms of content and tools.

Qualified Panel Builder of :



PANEL LINE FACTORY



Life Is On



GLOBAL OPERATIONS

Middle East Zone

East Mediterranean Countries

Iraq Branch

From : Robah Shaban

Date : 1.Jan.19

Email : Robah.shaban@schneider-electric.com

To : Whom it may concern

Subject : Qualified Panel Builder by Schneider Electric

We, Schneider Electric East Mediterranean SAL, certify that **PANEL LINE FACTORY**, based in Erbil, is a **Qualified Panel Builder Partner of Schneider Electric** to cover Iraq market only. None exclusive as per the contract signed on 1.Jan.19 & remains valid till 31.Dec.19.

This letter was given upon the request of **PANEL LINE FACTORY**, without liability of Schneider Electric East Mediterranean, and remains valid until 31.Dec.2019.

Please don't hesitate to contact us for any further information or clarification.

Robah Shaban

Country Sales Manager – Partners & Industry Business

Iraq & Jordan



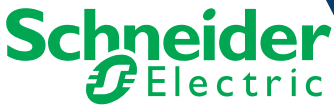
Schneider Electric East Mediterranean s.a.l
Iraq Office
100 meter St, Ekhlal, Empire center Bldg

2nd floor, Appt #15, Erbil - Iraq www.eastmed.schneider-electric.com

SAL fully paid capital of 100.000 USD
CR 1000716 Beirut-Lebanon Headquarters:

Tabaris Center 1063, 10th floor, Beirut - Lebanon

Qualified Panel Builder of :



PANEL LINE FACTORY



Certificate of Registration

This is to certify that the Quality Management System of



PANEL LINE FACTORY

Erbil - Makhmoor- ST_Besides the Timar kavora village.



has been assessed and found to conform to the requirements of

ISO 9001:2015

For the following scope:

Manufacturing of electrical panels and kiosks.



Certificate number: 25794

This certificate is valid from 10-July-2017 until 10-July-2020
And remains valid subject to satisfactory surveillance audits
On or before 09-July-2018 and 09-July-2019.
Re-certification audit due on 10-July-2020.
Certification expiry on 09-July-2020.

David Wilmer
Certification Manager

UNIVERSAL REGISTRARS

www.universalregistrars.com

This certificate can be verified at the above URL.
The certificate remains the property of Universal Registrars, to whom it
must be returned on request. Lack of fulfillment of certification terms
and conditions at all times, may render this certificate invalid.



ISO 9001:2015

Certificate of Compliance

This is to Certify that
the technical documentation for the products of

PANEL LINE FACTORY

IRAQ/ERBIL/MAMZAWA

The Technical Document maintained by the organization has been reviewed and found to comply with the requirements of Low Voltage Directive 2014/35/EU, Electromagnetic Compatibility (EMC) Directive - 2014/30/EU for the following Products:

1. ELECTRIC PANEL, MODEL NUMBER (EKO SERIESE)

This certificate of compliance is based on the Technical File of the above mentioned product.

Technical Report and Documentation are at the Organization's Disposal.

This is to certify that the Product is in conformity with all revision of Council Directive 2014/35/EU, 2014/30/EU referred to as Machinery. This certificate does not imply assessment of the series-production of the product and does not permit the use of AQC Middle East FZE mark of conformity.

| | | | |
|---------------------------|--------------|----------------|--------------|
| Certificate No. | : 18ICCP41 | Issuance Date | : 09/10/2018 |
| Initial Registration Date | : 09/10/2018 | | |
| Date of Expiry * | : 08/10/2021 | | |
| 1st Surve. Due | : 09/09/2019 | 2nd Surve. Due | : 09/09/2020 |


Director



AQC MIDDLE EAST FZE.

E1-1401 E Amber Gem Tower, Sheikh Khalifa Bin Zayed Road, 2, Ajman, UAE. e-mail : info@aqcworld.com,

*Validity of the Certificate is subject to successful completion of surveillance audit on or before of due date. (in case surveillance audit is not allowed to be conducted, this certificate shall be suspended/withdrawal).

Certificate Verification: Please Re-check the validity of certificate at <http://www.aqcworld.com/activeclients.aspx> or www.aqcworld.com at Active Clients.

Certificate is the property of AQC Middle East FZE and shall be returned immediately when demanded



Legal Translation

Kurdistan Regional Government - Iraq
Ministry of Commerce and Industry
Directorate General of Industrial Development
Industrial Development Directorate / Erbil
private sector factories

No: 1184

Date: 12/03/2013

To / Factory (PANAL LINE) For electric board manufacturing
Mr. / Aziz Omar Aziz - Erbil - industrial zone
Topic / (conditional) license No. 12508

With reference to your letter No. 5957 on 05.12.2012 we have granted a (conditional) license No. 12508 on 03.04.2013 for your factory, and this (conditional) license been granted under Article (6) of the Iraqi Law No. 25 of 1991 which it's private to private and mixed sectors Industrial Investment , and that will be under the name and in the above address and with a capital of (300,000,000) three hundred million Iraqi dinars. In accordance with the equipment registration certificate's no (501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514/49) on 03/05/2011 issued by Erbil notary directorate in accordance with the priorities presented to us your factory required to undergo the following points

The implementation of all the information listed in the foundation license grants form

- 1- Provide health occupational and safety conditions in the workplace /Under the relevant Parties certificate
- 2- You must establish the factory in the industrial area in according according to municipal plans
- 3- Provide the terms of the civil defense instructions in the factory place
- 4- Review the Chamber of Commerce and Industry for the purpose of registration the factory
- 5- Appointment of skilled workers for the purpose of work according to the quality of the product
- 6- Bound by the terms of the quality control of the products that is produced
- 7- You are not allowed in any way to sell or rating the factory equipment as scrap materials before three years from the date of the grant of this license, or it must be according to the Ministry's approval
- 8- The factory should begin working in within one year from the date of receipt of the land allocated to the Factory otherwise the granted license will be Canceled

Aras Rauf Arif
Industrial Development Director General
12.03.2015

Copy to

- *Directorate General of Municipalities - Erbil / for the purpose of allocation of land by category - with appreciation
- *Municipality Directorate of Erbil / for the purpose of allocation of land by category - with appreciation
- *General Directorate of Planning and Follow-up / knowledge with appreciation
- *Directorate General of Industrial Development / Technical Section kinder....
- *Directorate General of Industrial Development / Department control kinder
- *Erbil / conservative public administration / with appreciation
- *General Mderahalomn - Economic section - with appreciation
- *Directorate of Erbil environment kinder (4531407)
- *Directorate of Labour and Social Security - Erbil ... kinder
- *Chamber of Commerce and Industry of Erbil kinder
- *Industrial Development Directorate of Erbil / Directorate of private sector companies / with primitives / statistics kinder
- *Planning Directorate / Statistics

Gen. No:

10489

ERBIL NOTARY PUBLIC

Number:

53

Date: 24/05/2015

Mrs. Aween Abdulkhaleq Ismael is a sworn translator at ministry of justice - Iraq she presented herself in front this Office .under legal oath she declared that the English text is the true full and faithful translation of the Kurdish text of the above document .and after she signed on the text before me so that in writing on 24/05/2015

Notary Public

Yeminli Çevirmen // Sworn Translator Aween Abdulkhaleq Ismael

Iraq - Erbil-Doctors way in Street - fountain statue of sheikh mahmud- Near Oscar Photographer-shazad office.

Irak - Erbil -doktorlar caddesi girişi-seyh mahmud heykeli yani-shazad bürosu.

عراق -اربيل -بناية شارع الأطباء -حجوز مصور أوسكار شاذ

Tel:07504510772

tahsinekerci@yahoo.com

Ministry of Justice
Directorate General of judicial circuits
Department notary first Arbil

Notary
Jwan Samad Ahmed

Receipt No: 88088
Date: _____
Document No: _____

Accountant Name to recal: _____

Qualified Panel Builder of :



PANEL LINE FACTORY



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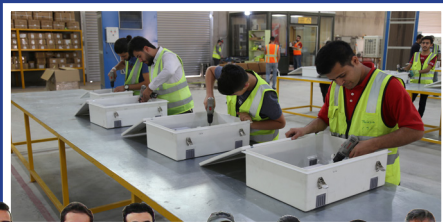
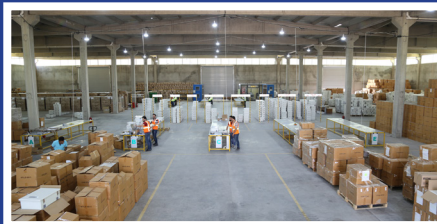
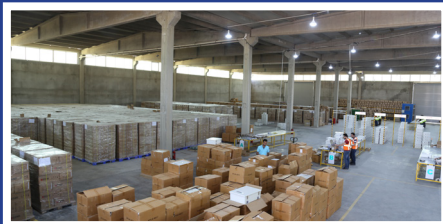
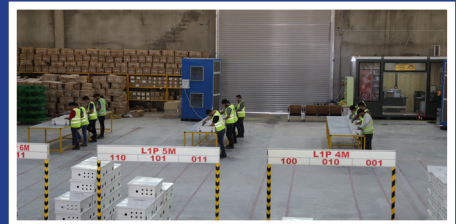
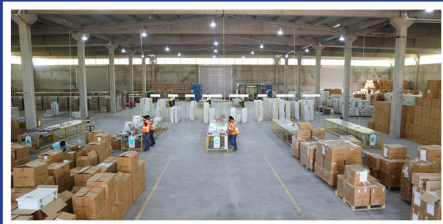
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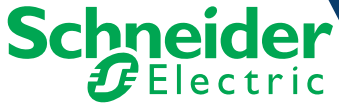
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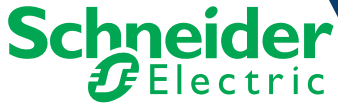
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FACTORY



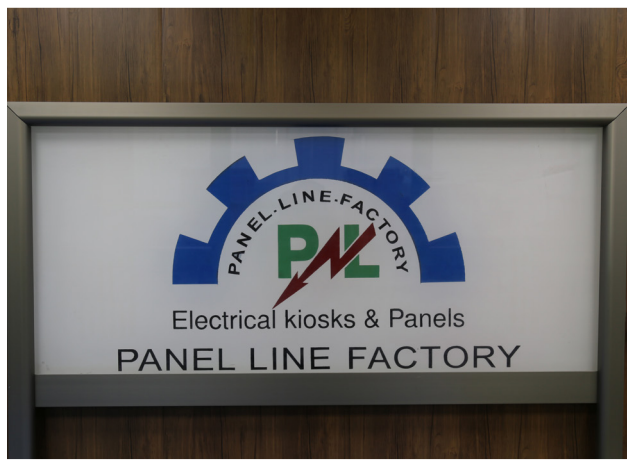
Qualified Panel Builder of :



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FACTORY



Panels

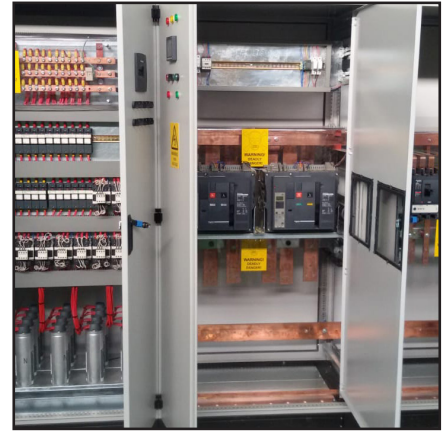
ATS Panel



ATS Panel



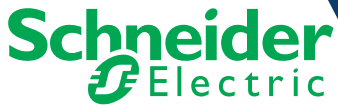
Capacitor Bank



Distribution Panel



Qualified Panel Builder of :

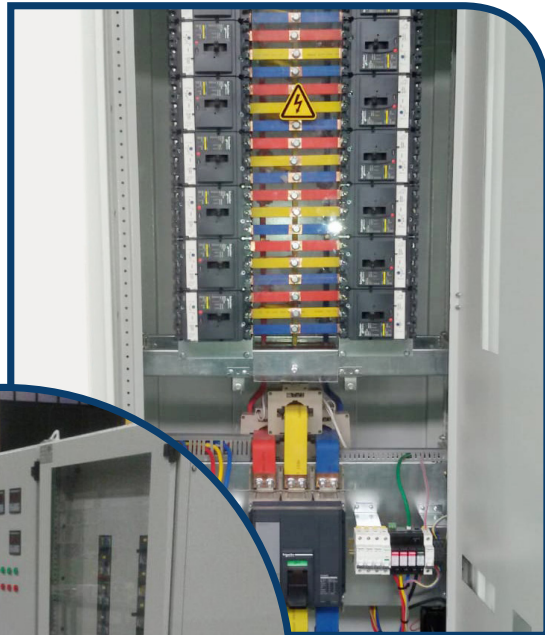


PANEL LINE FACTORY

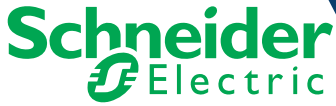


Panels

Distribution Panel



Qualified Panel Builder of :



PANEL LINE FACTORY

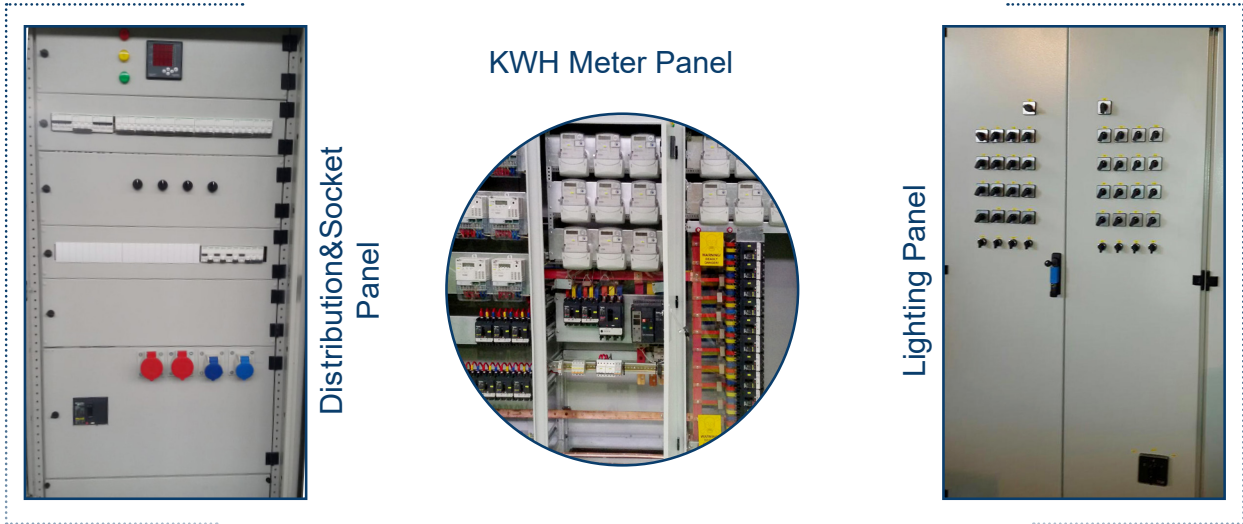


Panels

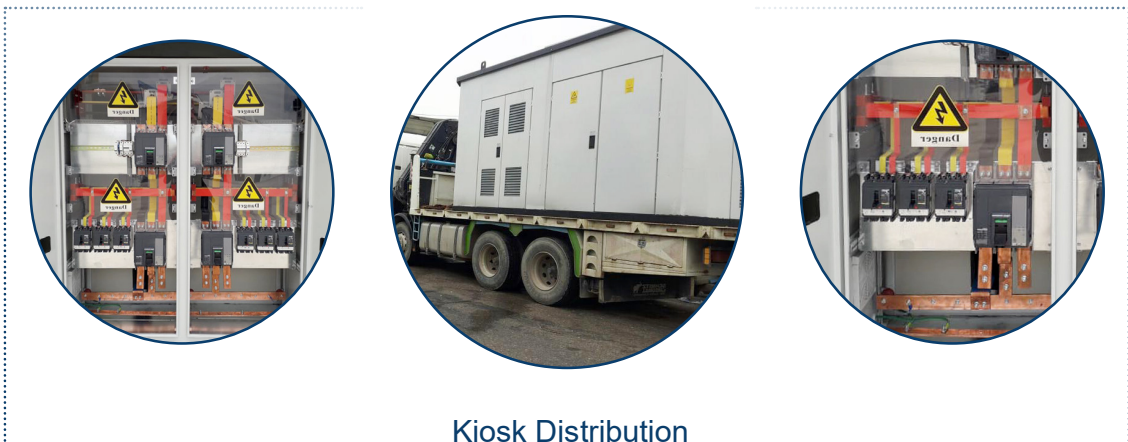
Distribution & Motor Control Panel



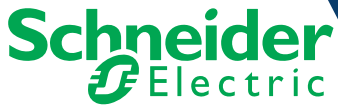
KWH Meter Panel



Kiosk Distribution Panel



Qualified Panel Builder of :

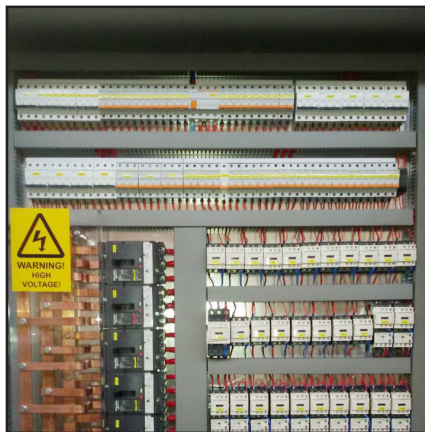
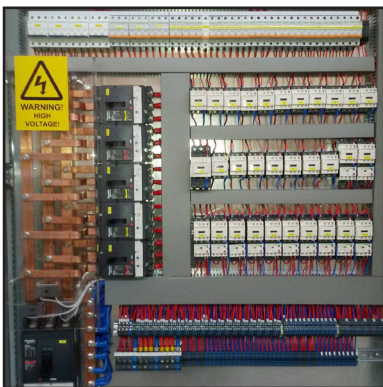
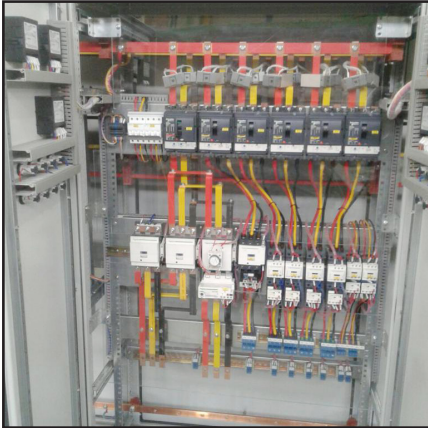


PANEL LINE FACTORY



Panels

Motor Control Panel



Soft Start Panel



Synchronize & ATS Panel



Transformers Panels

Panels



Qualified Panel Builder of :



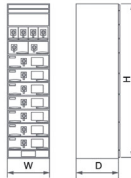
PANEL LINE FACTORY



Aikko Low voltage switchgear

Enclosure dimensions

| Width W (mm) | Depth D (mm) | Height H (mm) |
|--------------|--------------|---------------|
| 600 | 800/1000 | 2000 |
| 800 | 800/1000 | 2000 |
| 1000 | 800/1000 | 2000 |



Service conditions

| Description | Unit | Parameter |
|--------------------------------------|--------------------------------------|-----------|
| Ambient air temperature | Maximum | °C 40 |
| | Minimum | °C -5 |
| Maximum daily temperature difference | K | 25 |
| Altitude | m | ≤2000 |
| Pollution level | | II |
| Humidity | Average daily relative humidity 40°C | % ≤90 |
| | Maximum | % ≤95 |

* Note: In the case of a lower temperature, it is allowed to have a higher relative humidity up to 90% when the ambient temperature is >20°C.

Technical parameters

| Description | Unit | Parameter |
|--|------------------|-----------|
| Rated operating voltage | kV | ≤1000 |
| Rated insulation voltage | kV | ≤1000 |
| Rated frequency | Hz | 50/60 |
| Rated impulse withstand current | kV | 8 |
| Overvoltage category | level | III |
| Rated current | A | ≤4000 |
| Rated withstand current | KA | 100 |
| Rated peak withstand current | KA | 200 |
| Rated short-circuit withstand current (1s) | KA | 100 |
| Distribution/busbar peak current | KA | 105 |
| Degree of protection | Inner enclosure | IP 30K |
| | Outer enclosure | IP 30KX |
| Circuit rating | Enclosure | 3K 20/10 |
| Internal separation terms | | 30/20/10 |
| Profile module | mm | 35 |
| | mm | 100 |
| | mm | 200 |
| | mm | 300 |
| | mm | 400 |
| Drawer height | mm | 500 |
| | mm | 600 |
| | mm | 800 |
| Mounting mode | Upper busbar | |
| | Lower cable | |
| Charging mode | Side busbar | |
| | Rear upper cable | |
| | Rear lower cable | |

Applicable Standards

IEC 61439-1:2011 Low-voltage switchgear and controlgear assemblies - Part 1: General rules
IEC 61439-2:2011 Low-voltage switchgear and controlgear assemblies - Part 2: Power switchgear and controlgear assemblies



Aikko Low-voltage Switchgear



murge

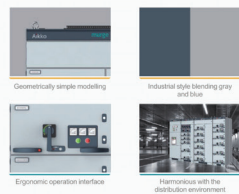
FOCUS ON USER, JUST DO BETTER



Addr: 338 Jinhai Avenue, Wenzhou Economic & Technical Development Zone, Zhejiang Province
Tel.: 0086-577-57572871 Fax: 0086-577-5757212
E-mail: info@murge-electric.com
Website: www.murge-electric.com

Aikko Low-voltage Switchgear

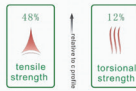
Visual shape Industrial beauty



Drawable structure A change of reliability

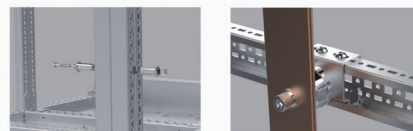


- Double-bending, joined with rigid rivets, and equipped with positioning feature
- Primary and secondary plugs with a record of failure-free operation of millions of times
- The T-shaped holes in the drawer bottom plate enhance the flexibility of mounting parts and components
- The backward bending of the drawer rear plate increases the clearance of electrical equipment connecting busbars
- The drawer has secondary line binding holes in situ to ensure reasonable and consistent wiring
- The drawer has secondary line binding holes inside to ensure reasonable and consistent wiring
- Safety human-factor design and detail-orientation is a continuous topic in our R&D process



Framed structure Robust Strength

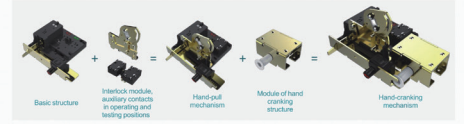
In this generation of LV Switchgear, Murge allocated the best of its engineers to design and innovate beyond technical parameters and traditional design thinking. Aikko series low switchgear is born as a thorough transformation from the 2nd generation.



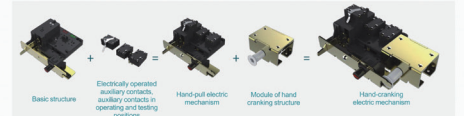
Compatible mechanism module

- Compatible with hand pull, hand cranking and electric modules, the panels can keep a highly unified style.
- The functionally strong auxiliary contacts can meet any requirement for their functions and prevent misoperation.

Hand-pull and hand-cranking mechanisms



Hand-pull and hand-cranking motorized mechanisms

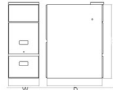


KYN28A switchgear

KYN28A-12/17.5/24 (II)

Enclosure Dimensions

| Cabinet type | Width W (mm) | Depth D (mm) | Height H(mm) |
|-----------------|--|------------------|--------------|
| KYN28A-12(II) | 400, 500, 600 ^① 800, 900, 1000 | 1400, 1610, 1700 | 2240 |
| KYN28A-17.5(II) | 600 ^② 800 | 1400, 2000 | 2000 |
| KYN28A-24(II) | 800 | 1400, 2200 | 2400 |



① Note: ① Busbar housing cabinet ; ② The rated current is less than 1250A.

Service Conditions

| Sr. No | Description | Unit | Parameter |
|--------|--|---------|-----------|
| 1 | Ambient air temperature | Maximum | 40 |
| | | Minimum | -15 |
| 2 | Maximum air temperature difference | K | 20 |
| 3 | Altitude | m | 4300 |
| 4 | Relative humidity | % | 20-90 |
| 5 | Average daily relative humidity | % | 95 |
| | average monthly relative humidity | % | 90 |
| | Seismic capacity (horizontal acceleration) | g | 0.2 |

Note: The conditions given in the table are normal service conditions. Special operating conditions are to be agreed upon by the manufacturer and user. The manufacturer must be consulted in advance about each special operating condition.

Technical Parameters

| Sr. No | Description | Unit | Parameter |
|--------|---|-----------|---------------------|
| 1 | Insulation level | V | 12, 17.5, 24 |
| 2 | Rated frequency | Hz | 50/60 |
| 3 | Rated current | A | 6300, 13100, 13100 |
| 4 | Temperature rise test | K | |
| 5 | Rated current (primary) withstand voltage (1min) | kV | 25, 36, 36 |
| 6 | Rated current (primary) withstand voltage (5min) | kV | 7.5, 8.5, 10.5 |
| 7 | Rated short-circuit making current | kA | 43, 31.5, 31.5 |
| 8 | Rated short-circuit breaking current | kA | 100, 80, 80 |
| 9 | Rated short-circuit current and duration | kA/s | 8/3, 31.5/3, 31.5/3 |
| 10 | Rated peak withstand current | kA | 100, 80, 80 |
| 11 | Short-circuit power frequency withstand voltage of auxiliary and control circuits | kV | 2 |
| 12 | Degree of protection | Enclosure | IP4X |
| | Component | | IP2X |
| 13 | Local anti-vibration category | Level | Level 2 |
| 14 | Coating method | | Hot-dip coating* |
| 15 | IEC classification | IP4X | |
| 16 | Internal arc withstand current | MA 1/s | 31.5 |

Note: * If the rated current > 1250A, hot-dip coating should be adopted.

murge

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Address: 338 Jinhai Avenue, Wenzhou Economic & Technical Development Zone, Zhejiang Province
Tel: 0086-576-57272211 Fax: 0086-577-5727212
E-mail: info@murge-electric.com
Website: www.murge-electric.com

murge



KEMA

12kV

KYN28A-12/17.5/24 (II)



Metal-enclosed Withdrawable Switchgear

murge

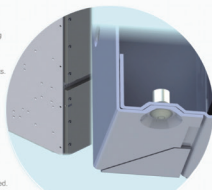
KYN28A-12/17.5/24 (II)

Air-proof, air insulated switchgear
Complying with IEC 62271-1 and IEC 62271-200 standards
Designed for the highest operational reliability and personnel safety

murge

Technical improvement items:

- The side plate employs inward double-banding technology.
- The framework is connected with dimpled rivets.
- The side has no protruded screws and relief holes.
- Separate replacement is realizable in case of failures.
- The time for power restoration can be shortened.

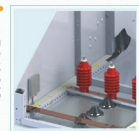


The rear upper and lower doors are interlocked, which ensures that the rear upper door cannot be opened when the rear lower door is closed, on the contrary, the rear lower door cannot be closed when the rear upper door is opened. This is to ensure the safe operation of maintenance technicians.

The ground interlock, simpler in structure and more flexible and reliable in operation, can deliver free switch of interlocking functions whether equipped with a manual or motorized earthing switch, without requiring the replacement of any part.



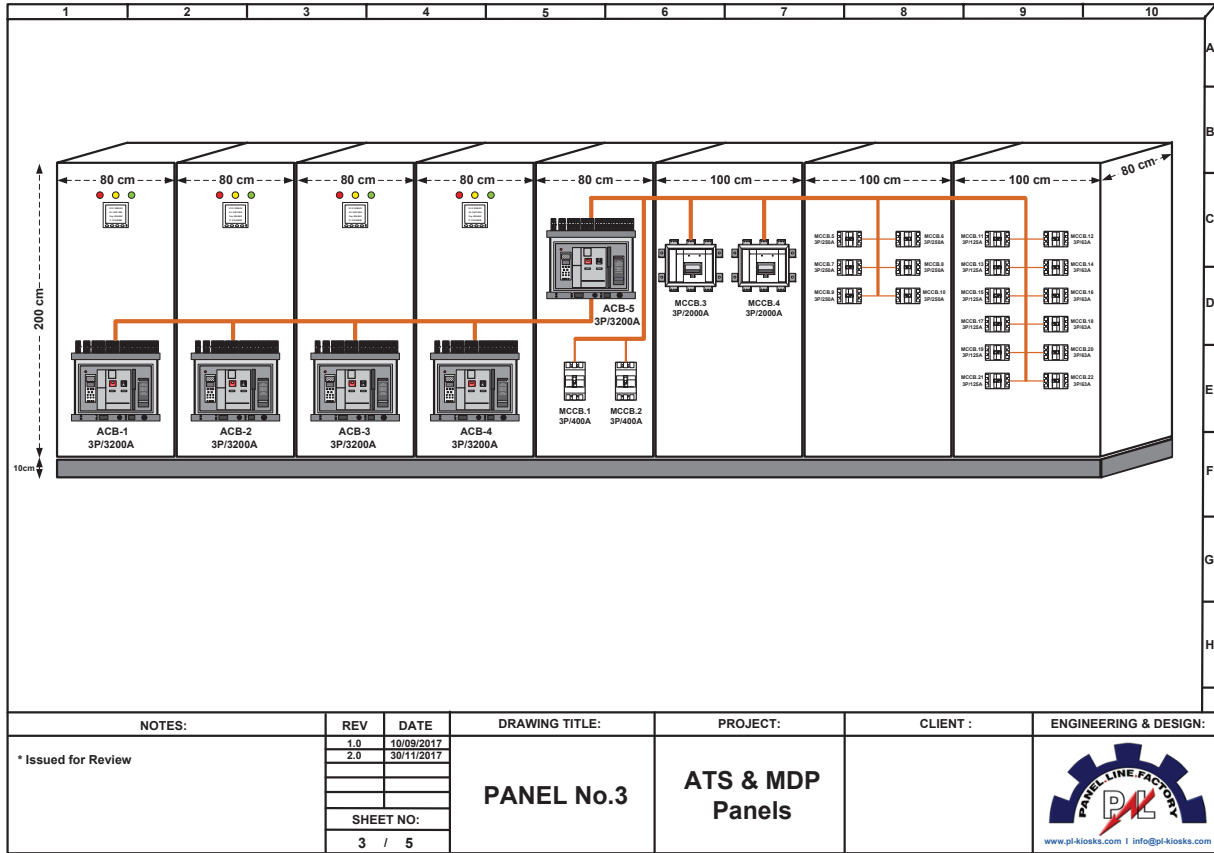
- Proprietary design of pressure relief cover plate
- One side is equipped hinges while the other fixed with nylon screws
- Reduce resistance in pressure relief
- Realize quick relief to ensure safety
- Relief cover has a corrugated grille inside to prevent arcs and burning particles spattering.



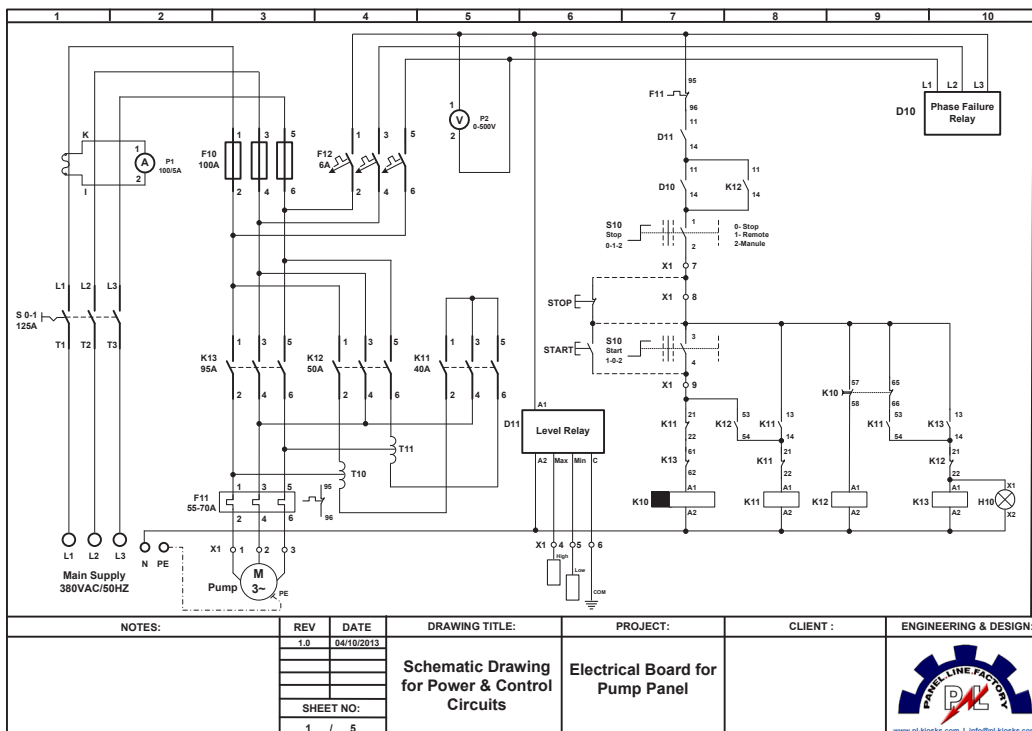
The secondary cables are covered in the metal protected secondary wiring troughs, which can effectively prevent arcs burning the secondary line in case of failure in the enclosure. Signals can be correctly transmitted through the secondary line to the comprehensive protection controls system to realize fast fault-clearing, mitigating the damage inflicted by failure on electric equipment and improving the stability of electric systems.

100% air-insulated protection

ATS & MDP-Layout Drawing



Pump Panel Drawing



Copper Bus Bar

SOLID COPPER BARS

Example of bar choice
for $I_n = 800$ A

for $T_{max} = 85^\circ\text{C}$

with copper prepunched bar

63 x 5 $I_n = 951$ Amp

with solid copper bar

63 x 5 $I_n = 951$ Amp

40 x 10 $I_n = 944$ Amp

with solid aluminum bar

50 x 10 $I_n = 874$ Amp

cf. tables with

$\Delta T = 50^\circ\text{C}$

where:

T_{max} = max. considered working temperature

T_a = reference room temperature

ΔT = temperature increase in $^\circ\text{C}$

$T_{max} = 50^\circ + 35^\circ = 85^\circ\text{C}$

| Dimensions | Cross-section mm ² | Kg/mt | Number of bars in parallel | | | | | | | |
|------------|-------------------------------|-------|-----------------------------|------|------|------|-----------------------------|------|------|------|
| | | | $\Delta T 30^\circ\text{C}$ | | | | $\Delta T 50^\circ\text{C}$ | | | |
| | | | | | | | | | | |
| 12 x 4 | 48 | 0.43 | 160 | 292 | 403 | 451 | 212 | 387 | 534 | 598 |
| 12 x 5 | 60 | 0.53 | 183 | 334 | 460 | 514 | 241 | 440 | 607 | 679 |
| 15 x 5 | 75 | 0.67 | 218 | 405 | 567 | 635 | 289 | 537 | 751 | 841 |
| 20 x 5 | 100 | 0.89 | 274 | 500 | 690 | 772 | 363 | 663 | 914 | 1023 |
| 25 x 5 | 125 | 1.11 | 327 | 586 | 795 | 890 | 433 | 776 | 1053 | 1179 |
| 30 x 5 | 150 | 1.33 | 379 | 672 | 896 | 1003 | 502 | 890 | 1187 | 1329 |
| 32 x 5 | 160 | 1.42 | 400 | 494 | 931 | 1043 | 530 | 920 | 1234 | 1382 |
| 40 x 5 | 200 | 1.78 | 482 | 836 | 1090 | 1220 | 639 | 1108 | 1444 | 1617 |
| 50 x 5 | 250 | 2.23 | 583 | 994 | 1260 | 1411 | 772 | 1317 | 1670 | 1870 |
| 60 x 5 | 300 | 2.67 | 688 | 1150 | 1440 | 1613 | 912 | 1524 | 1908 | 2137 |
| 63 x 5 | 315 | 2.80 | 718 | 1197 | 1494 | 1673 | 951 | 1586 | 1980 | 2217 |
| 80 x 5 | 400 | 3.56 | 885 | 1450 | 1750 | 1960 | 1173 | 1921 | 2319 | 2597 |
| 100 x 5 | 500 | 4.45 | 1080 | 1730 | 2050 | 2296 | 1431 | 2292 | 2716 | 3042 |
| 125 x 5 | 625 | 5.56 | 1300 | 2022 | 2381 | 2666 | 1723 | 2679 | 3155 | 3532 |
| 20 x 10 | 200 | 1.78 | 427 | 734 | 959 | 1151 | 564 | 970 | 1269 | 1522 |
| 30 x 10 | 300 | 2.67 | 573 | 986 | 1289 | 1547 | 756 | 1300 | 1701 | 2041 |
| 40 x 10 | 400 | 3.56 | 715 | 1230 | 1609 | 1931 | 944 | 1624 | 2124 | 2549 |
| 50 x 10 | 500 | 4.45 | 852 | 1510 | 2040 | 2448 | 1129 | 2001 | 2703 | 3243 |
| 60 x 10 | 600 | 5.34 | 985 | 1720 | 2300 | 2760 | 1305 | 2279 | 3048 | 3658 |
| 80 x 10 | 800 | 7.12 | 1240 | 2110 | 2790 | 3124 | 1643 | 2796 | 3697 | 4140 |
| 100 x 10 | 1000 | 8.90 | 1490 | 2480 | 3260 | 3651 | 1974 | 3286 | 4320 | 4838 |
| 120 x 10 | 1200 | 10.70 | 1740 | 2860 | 3740 | 4188 | 2306 | 3790 | 4956 | 5550 |
| 160 x 10 | 1600 | 14.25 | 2220 | 3590 | 4680 | 2942 | 4757 | 6201 | | |
| 200 x 10 | 2000 | 17.80 | 2690 | 4310 | 5610 | 3564 | 5711 | 7433 | | |

Ampacity table Aluminum bar based on the ΔT temperature increase as per standard DIN 43670
Reference room temperature 35°C

IP and IK CLASSIFICATION

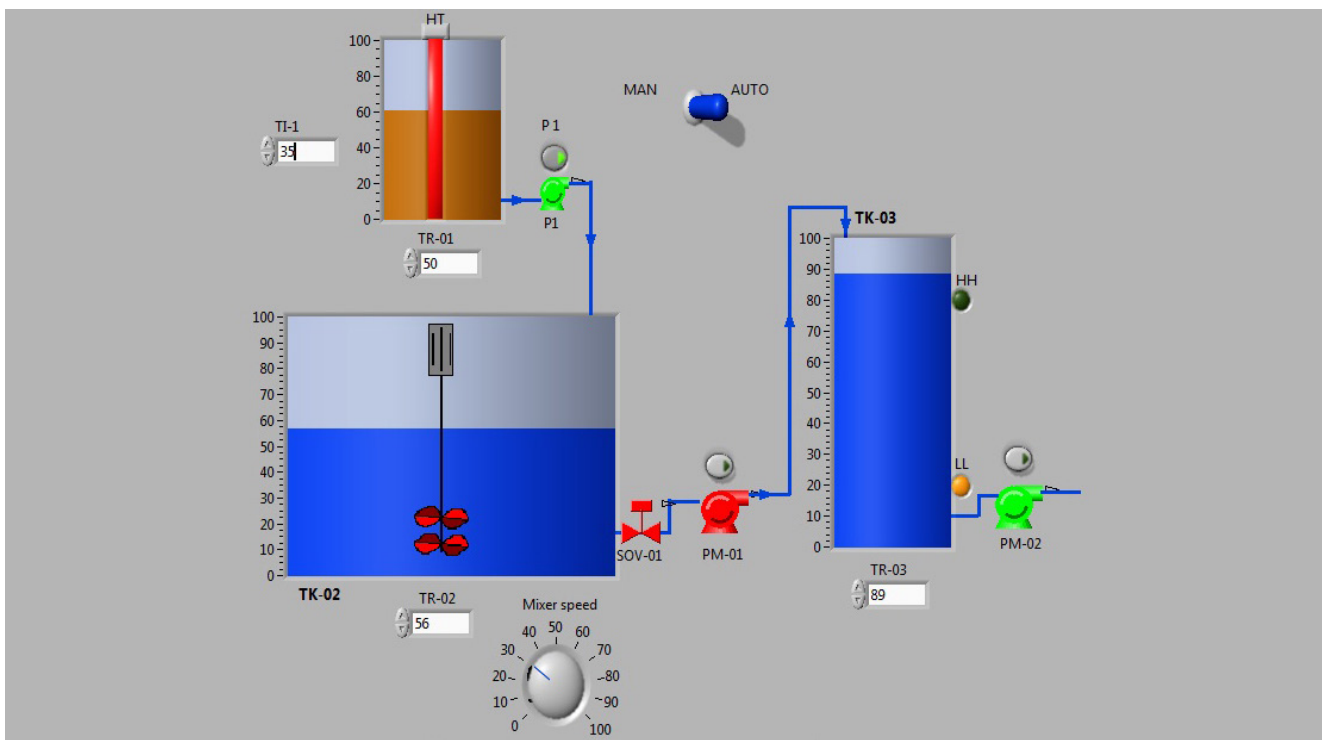
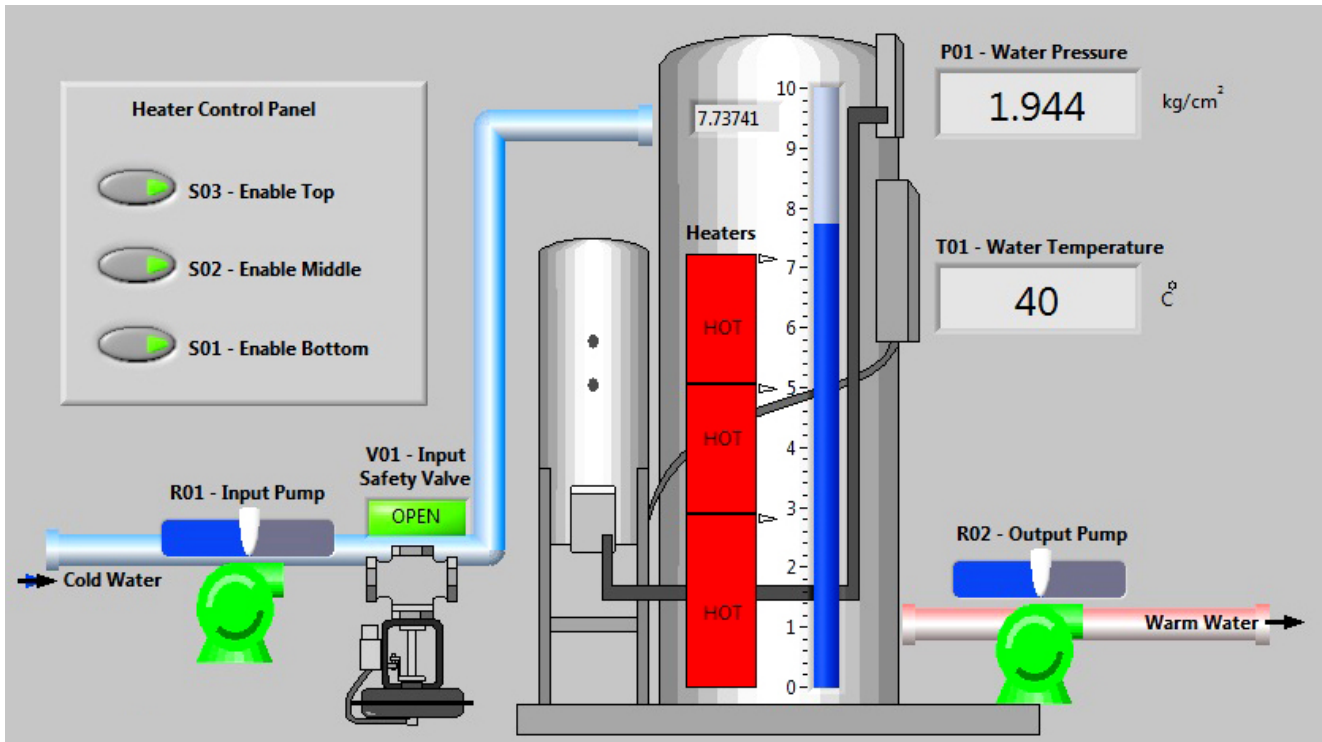
The degree of protection is given in the form of IP classification (Protection Index), in 2-digit format, according to the lower classification. Fibox has tested the boxes according to EN 60529.

The new European standards for empty envelopes according to EN 62208 also include the IK impact test

ip_ik_classification

| FIRST NUMBER Protection against solid objects | | SECOND NUMBER Protection against liquids | | IK CODE Impact protection | |
|--|--|---|--|------------------------------|--------------------|
| IP | TEST | IP | TEST | IK | TEST |
| 0 | Without protection | 0 | Without protection | 0 | Without protection |
| 1 | Protected against solid objects > 50 mm. Ex. Touching with fingers | 1 | Protected against vertical drop of water droplets | 01, 05 | Impact < 1 joule |
| 2 | Protected against solid objects > 12 mm. Ex. Touch with fingers | 2 | Protected against sloping vertical waterfall 15° | 06, 10 | Impact 1 joule |
| 3 | Protected against solid objects > 2.5 mm. Ex. Cables, Tools | 3 | Protected against sloping vertical waterfall 60° | 07 | Impact 2 joule |
| 4 | Protected against solid objects > 1 mm. Ex. Cables, Tools | 4 | Protected against falling water at any angle | 08 | Impact 5 joule |
| 5 | Protected against dust | 5 | Protected against low pressure water jet | 09 | Impact 10 joule |
| 6 | Totally dustproof | 6 | Protected against high pressure water jet | 10 | Impact 20 joule |
| | | 7 | Protected against the effects of immersion between 15cm | | |
| | | 8 | Protected against long periods of immersion under pressure | | |

SCADA System



Qualified Panel Builder of :



PANEL LINE FACTORY



job pyramid structure



Qualified Panel Builder of :



PANEL LINE FACTORY



Some of Our Valuable Customers:





معمل بنل لاين هو المصنع الأول والوحيد في الأقليم
وشمال العراق المعتمد من شركة شنايدر الكتريك
العالمية لتصميم وبناء اللوحات الكهربائية