

AGENA 280

USER'S MANUAL



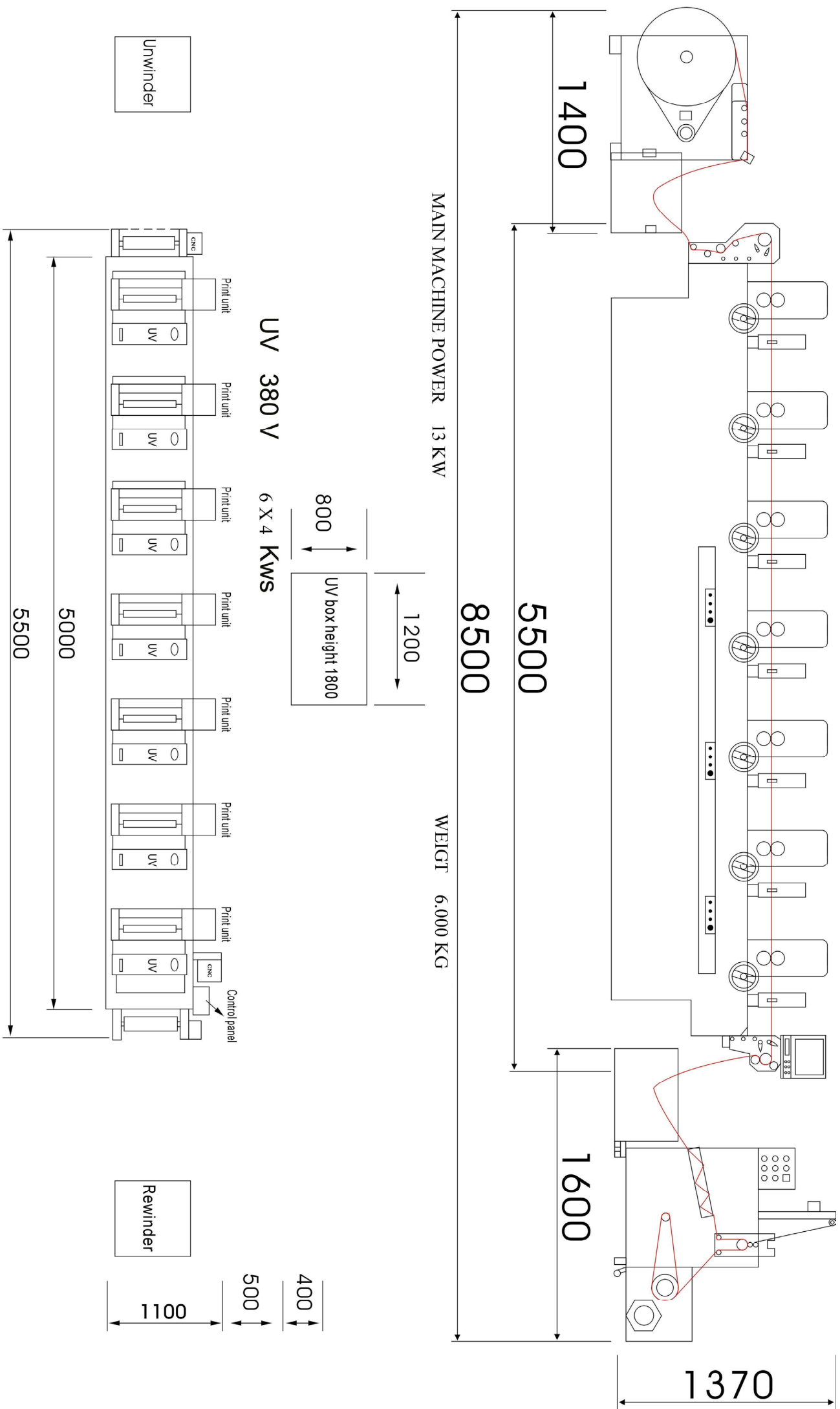


Etimac Service

PRINTING MACHINES AND LABELS EQUIPMENTS

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Technical parameters and applicable components

description	specification
paper width	280mm
full rotary printing area	260mmX329mm
intermittent printing area (max.)	260mmX245mm
intermittent printing area (min.)	260mmX30mm
side frame width	230mm
registration accuracy	9000 r/h
registration accuracy	±0.05
main machine power	13KW
UV drying gross power	4 KW/unit
backward-pull motor power	400W
main machine voltage	3-phase 380/ 220VAC±10% 50/60HZ 40A
UV voltage	3-phase 380VAC±10% 50/60HZ 45A
machine weight	6000 KGS
machine size	L5500mm×W1220mm×H1480mm

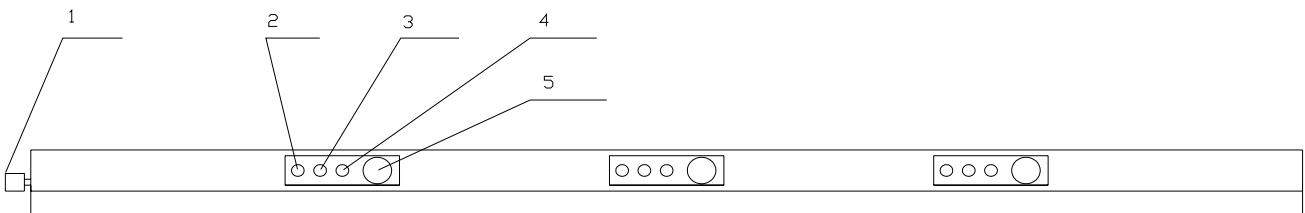
component configuration

control computer :	Aerospace computer (America)
motors :	Yaskawa (Japan)
Touch Screen	Proface (Japan)
contactor	Schneider (Europe)
ink roller	Japan / Europe
pushbutton	Schneider (Europe)
relay	Fenda (Europe)
gear feature	20 chromansil – titanium (accuracy up to 6-class) (Europe)
UV dryer	Mge (Europe)
voltage phase-sequence protection	CARLO (Switzerland)
plc	Mitsubishi (Japan)

Check-up before starting the machine

1. Check if the electrocircuit can normally work or not.
2. Check if the electric components can work well or not.
3. Check the lubrication status of all the machine parts.

Sketch map of the pushbuttons on the work table



There are three operation boxes along the work table and each operation box has the same function, just for the operator to easily run the machine.

1. Fine adjustment switch of the backward-pull motor: This switch can adjust the back-pull motor to speed up or slow down.
2. RUN: Start and run the machine.
3. INCH: (1) Stop the machine; (2) Under INCH mode, plate wiping is possible.
4. STOP: Press the STOP button while the machine is running, the machine will slow down and then stop.
5. EMERGENCY: Press EMERGENCY button in an emergency, the power supply will automatically turn off and the machine stops running.

Plane figure of the Touch Screen

print length

24000

sheet setting

8000000

sheet display

clear

NCKEL

running display

print speed

-

3000

+

count sw

OFF

man/ auto

auto

print mode

intermittent

1st pass, 2nd pass

1st pass

mode

battery film

backward

pull backward

tension

forward tension

forward pull

(U)

Start

Stop

Error

Power ON

Power OFF

Emergency

PRINT LENGTH

8550

SHEET SETTING

9999999

SHEET DISPLAY

1555

RESET

RUNNING
DISPLAY



PRINT SPEED



4500

+

COUNT SW MAN/AUTO PRINT MODE

ROUGH FINE
ADJUSTMENT ADJUSTMENT

MODE

OFF

MAN

INTERMITTENT

1ST PASS

1ST PASS

BATTERY FILM

BACKWARD
PULL

BACKWARD
TENSION

FORWARD
TENSION

FORWARD
PULL

HOME



08/10/25

11:59:45

V

COATED PAPERD

36700

Z

36720

HOME

38500

BOPP

36730

36750

PE

36730

36780

PET

36730

36780

BATTERY FILM

36850

36890

IRIDESCENT FILM

36750

36800

OTHER

36750

36820

PREVIOUS

NEXT

Operation boxes on the Touch Screen

888888			
CANCEL		◀	▶
7	8	9	DEL
4	5	6	—
1	2	3	ENT
0	,	CLR	

The above “operation boxes” are for setting various parameters such as “Sheet-count”, “print-length” and “print speed” etc.

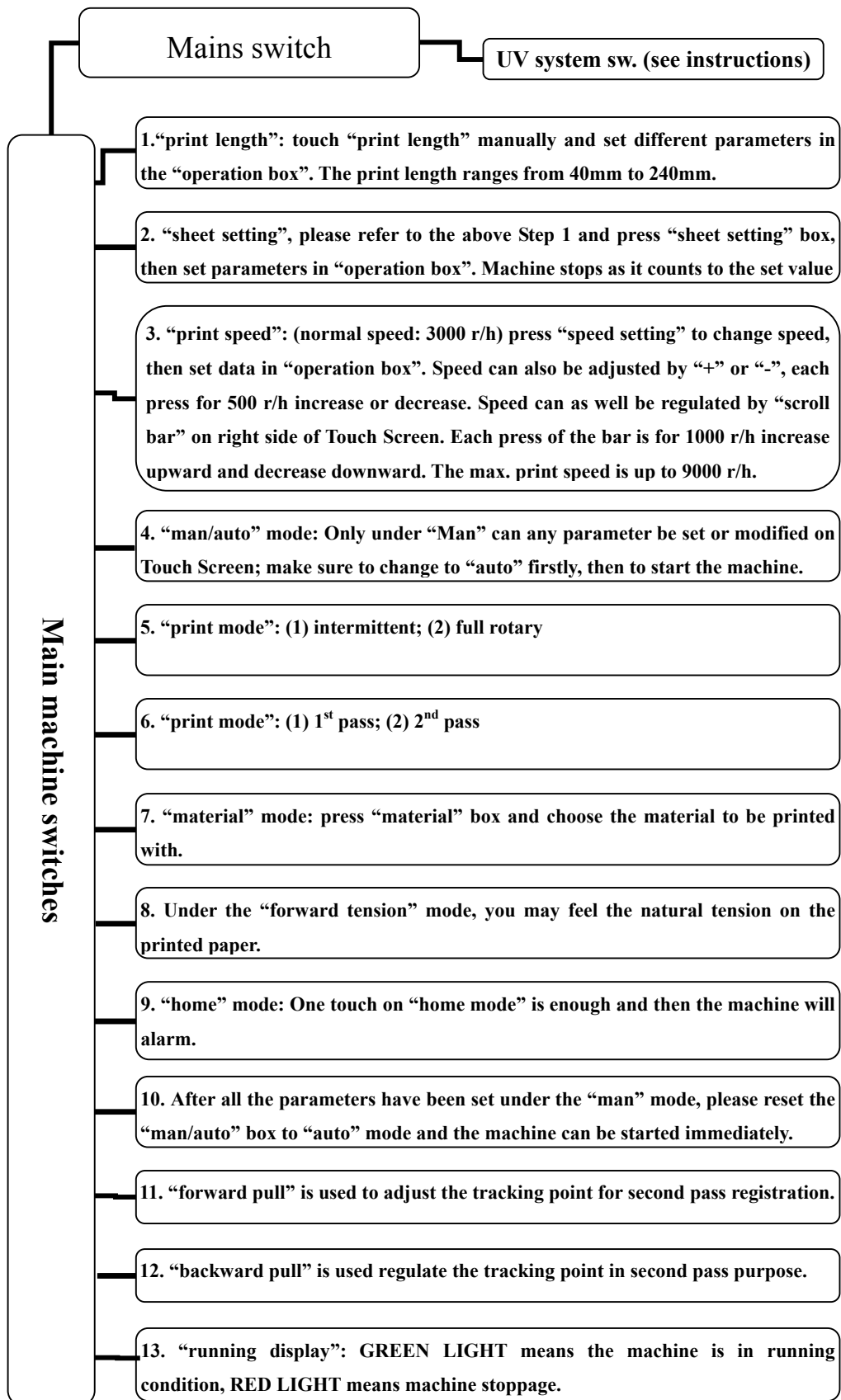
Points for attention:

1. After pressing “Emergency Stop” button each time (inclusive of turning off all the power supply), you must reset all the parameters as per the previous operation procedures and then you can restart the machine.
2. Before starting the machine, please check carefully the on-off status of inking roller clutch of each unit and please pay attention to the following information as well:
 - 1) Two print modes: “Full Rotary” and “Intermittent”
 - 2) 1st pass is normal printing mode and 2nd pass is tracking print mode.
 - 3) “Forward Pull” and “Backward Pull” are applicable in 2nd printing adjustment.

Note:

1. CANCEL: delete key
2. CLR: clear key
3. DEL: select key
4. ENT: confirm key

Operation flowchart



Second pass operation

1. Tracking the color marks for second pass.

- 1) The width and the length of the color mark should be bigger than 3mm, whenever possible print a spot of minimum 3mm by 7mm (7 mm being across the paper)
- 2) Be sure there is no other color or printing image between the color marks.
- 3) The color marks should be dark or deep color, for example, deep black, deep blue, deep red etc.

2. Photocell operation:

- 1) Make the photocell light beam aim at the unprinted paper, and keep pressing the “BKGD” button until the two indication lamps on the photocell go out. Then release the “BKGD” button, the photocell will change from memorizing the white color to tracking the ground color.
- 2) Make the color mark which you need to track printing aim at the photocell light beam, keep pressing the “MKRK” for 2 to 3 seconds, and release the “MKRK” button. Then the two indication lamps on the photocell will light at the same time, and the photocell will regard this color mark as the surface tracking color.
- 3) If the ground color and the surface tracking color change, then please repeat the above 1) and 2) operations.
- 4) Also please make sure the photocell light beam in its smallest state. It means that the photocell light beam should be a very small light point.

3. After finishing the above operations, please do the following operations step by step:

- 1) Change the “fine adjustment” button on the Touch Screen to set it to be “2nd pass”;
- 2) MEASURE PRECISELY THE DISTANCE BETWEEN 2 SPOTS, because paper might shrink or loose tension , depending on the type of paper
Set the printing length in the “print length” box;
- 3) Press “home” button to return to the original point;
- 4) Press “forward pull” button to make the tracking color mark aim at the photocell light beam/point;
- 5) Set the “print mode” to be “AUTO”
- 6) Start the machine again and you can do the second pass printing!

ENGLISH

Contrast Scanner
with Teach-in
Operating Instructions

Safety Specifications

- ▶ Read the operating instructions before starting operation.
- ▶ Connection, assembly, and settings only by competent technicians.
- ▶ Protect the device against moisture and soiling when operating.
- ▶ No safety component in accordance with EU machine guidelines.

Proper Use

The KT 5-2 contrast scanner is an optoelectronic sensor and is used for optical, non-contact detection of contrast marks.

Starting Operation

- Equipment plug horizontally (H) and vertically (V) adjustable. Connect and secure cable receptacle tension-free. The following apply for connection in **bl**=brn=brown, blu=blue, blk=black, gra=gray, wht=white. Outputs: Q_p or Q_v.
- Connect the scanner according to the **B** connection chart. Release delay see: Timing element (corresponding to type label, see below). Select light emission side; replace the lens with a dummy screwed connection if necessary.
- Select the insertion position so that the light spot enters the marking vertically. Pay attention to the key; see below: A=vertical, B=horizontal.
- Mount the sensor with mounting holes at the place (e.g., deflection roller) where the test object has the least horizontal and vertical movement. Pay attention to the scanning range when doing this (see the technical data at the end of these operating instructions and the chart: x=scanning range; y= relative sensitivity). Align the horizontal and vertical movements of the test object using correspondingly long markings. Make sure that sensor movement does not influence the scanning distance.
- In the case of objects with reflective or shiny surface, tilt sensor by 10° to 15° relative to surface. Connect cables. ET: External Teach input for programming the switching threshold using an external signal. Lock the Teach-in button against unintentional activation with „RUN“. Teach-in can be triggered if the switch setting is not defined. Saving the settings:
- KT 5G-2_ _ _ _ 2 only:**
Place the mark in the light spot
Set the control knob to the existing contrast (fine for slight contrasts; coarse for greater contrasts).
The switching threshold is maintained after the power supply is switched off. Activate Teach-in via the Teach-in button or control line; status indicator lights. The Teach-in procedure ends.
- KT 5W-2_ _ _ _ 6 only:**
1. Teach-in procedure:
Position the mark or background in the light spot and activate Teach-in via the Teach-in button or control line. The red sender light and the status indicator blink slowly.
2. Teach-in procedure:
Position the mark or background in the light spot and activate Teach-in via the Teach-in button or control line. The Teach-in procedure ends. If the red sender light and the status indicator blink fast, the contrast is insufficient. Light/dark switching is adjusted automatically.

Key: **KT 5_-2_ _ _ _ _ 6:**

Light source	Output Q	Light spot	Scanning distance	Timing element	Teach-in
G=green light W=red, blue or green light	P=PNP N=NPN	1=horizontal 2=vertical	1=10 mm 2=20 mm 3=40 mm	1=without 2=20 ms Time delay	2=static Teach-in on mark 6=static Teach-in on mark and background

Maintenance

SICK photoelectric switches do not require any maintenance. We recommend that you clean the optical interfaces and check the screw connections and plug-in connections at regular intervals.

DEUTSCH

Kontrasttaster
mit Teach-in
Betriebsanleitung

Sicherheitshinweise

- ▶ Vor der Inbetriebnahme die Betriebsanleitung lesen.
- ▶ Anschluss, Montage und Einstellung nur durch Fachpersonal.
- ▶ Gerät bei Inbetriebnahme vor Feuchte und Verunreinigung schützen.
- ▶ Kein Sicherheitsbauteil gemäß EU-Maschinenrichtlinie.

Bestimmungsgemäße Verwendung

Der Kontrasttaster KT 5-2 ist ein optoelektronischer Sensor und wird zum optischen, berührungslosen Erfassen von Kontrastmarken eingesetzt.

Inbetriebnahme

- Gerätestecker nach horizontal (H) und vertikal (V) schwenkbar. Leitungsdose spannungsfrei aufstecken und festschrauben. Für Anschluss in **A** gilt: brn=braun, blu=blau, blk=schwarz, gra=grau, wht=weiß. Ausgänge: Q_p oder Q_v. Taster laut Anschlusschema **B** anschließen. Abfallverzögerung: Zeitglied (entspr. Typenschlüssel, s. u.). Lichtaustrittsseite wählen, ggf. Objektiv gegen Blindverschraubung austauschen.
- Einbaulage so wählen, dass Lichtfleck längs in die Markierung eintritt. Dabei Typenschlüssel beachten, s. u.; A=längs, B=quer.

SICK
KT 5G-2 P/N1112
KT 5W-2 P/N1116

8 008 977.1102 GO KE

We reserve the right to make changes without prior notification
Änderungen vorbehalten
Angabe ohne Produktigenschaften und technische Daten stellen keine
Garantieerklärung dar
Sous réserve de modifications
Reservam-se alterações
Ret til ændringer forbeholdes
Con riserva di modifiche
Wijzigingen voorbehouden
Reservado el derecho a introducir modificaciones
经改装

- Sensor mit Befestigungsbohrungen an Stelle (z. B. Umlenkrolle) montieren, an der das Prüfobjekt die geringsten Seiten- und Höhenbewegungen ausführt. Dabei lastweite beachten (s. technische Daten am Ende dieser Betriebsanleitung und siehe Diagramm, x=Tastweite, y=relative Empfindlichkeit). Seiten- und Höhenbewegungen des Prüfobjektes durch entsprechend lange Markierungen ausgleichen. Bewegungen des Sensors mit Tastweiteinfluss ausschließen.
- Bei spiegelnden oder glänzenden Oberflächen Sensor um 10° bis 15° zur Materialoberfläche neigen. Leitungen anschließen.
ET: Eingang Extern Teach, zur Programmierung der Schaltschwelle über externes Signal.
Den Teach-in Knopf gegen unbeabsichtigtes Betätigen mit „RUN“ sperren. Bei undefinierter Schalterstellung kann kein Teach-in ausgelöst werden.
Einstellung Speicherung:
- Nur KT 5G-2_ _ _ _ 2:**
Marke in Lichtfleck bringen.
Drehknopf auf vorliegenden Kontrast einstellen (fine bei geringen Kontrasten; coarse bei großen Kontrasten).
Nach Abschalten der Versorgungsspannung bleibt die Schaltschwelle erhalten. Teach-in über Teach-in-Knopf oder Steuerleitung. Funktionsanzeige leuchtet. Teach-in-Vorgang beendet.
- Nur KT 5W-2_ _ _ _ 6:**
1. Teach-in-Vorgang:
Marke oder Untergrund in den Lichtfleck bringen und Teach-in über Teach-in-Knopf oder Steuerleitung. Das rote Sendelicht und die Funktionsanzeige blinken langsam.
2. Teach-in-Vorgang:
Untergrund oder Marke in den Lichtfleck bringen und Teach-in über Teach-in-Knopf oder Steuerleitung. Teach-in-Vorgang beendet. Blinken das rote Sendelicht und die Funktionsanzeige schnell: Kontrast nicht ausreichend. Hell-/Dunkelumschaltung wird automatisch angepasst.

Typenschlüssel: **KT 5_-2_ _ _ _ _**

Lichtquelle	Ausgang Q	Lichtfleck	Tastweite	Zeitglied	Teach-in
G=Grünlicht W=Rot-, Blau- oder Grünlicht	P=PNP N=NPN	1=längs 2=quer	1=10 mm 2=20 mm 3=40 mm	1=ohne 2=20 ms Abfallverzögerung	2=statisches Teach-in auf Marke 6=statisches Teach-in auf Marke und Untergrund

Wartung

SICK-Lichttaster sind wartungsfrei. Wir empfehlen, in regelmäßigen Abständen
- die optischen Grenzflächen zu reinigen,
- Verschraubungen und Steckverbindungen zu überprüfen.

A

B

UL For use in class 2 circuits

KT 5					G-2 P1112	G-2 N1112	W-2 P1116	W-2 N1116
Scanning range	Tastweite	Distance de détection	Campo de exploraç ão	Tastvidde	10 mm	10 mm	10 mm	10 mm
Light spot	Lichtfleck	La tache lumineuse	Ponto luminoso	Lysplet	1.2 x 4.2 mm	1.2 x 4.2 mm	1.2 x 4.2 mm	1.2 x 4.2 mm
Supply voltage U _V ¹⁾	Versorgungsspannung U _V ¹⁾	Tension d'alimentation U _V ¹⁾	Tensã o de forç a U _V ¹⁾	Forsyningsspænding U _V ¹⁾	DC 10...30 V	DC 10...30 V	DC 10...30 V	DC 10...30 V
Switching output	Schaltausgang	Sortie logique	Saí da de circuito	Koblingsudgang	PNP	NPN	PNP	NPN
Signal sequence ²⁾	Signalfolge ²⁾	Fréquence ²⁾	Sequência de sinais ²⁾	Signalfølge min. ²⁾	10 000/s	10 000/s	10 000/s	10 000/s
Response time	Ansprechzeit	Temps de réponse	Tempo de reac ão	Responstid	50 µs	50 µs	50 µs	50 µs
Enclosure rating	Schutzart	Type de protection	Tipo de protec ão	Tæthedsg rad	IP 67	IP 67	IP 67	IP 67
Ambient operating temperature	Betriebsumgebungstemperatur	Température ambiante	Temperatura ambiente de operaç ão	Driftsomgivelsestemperatur	-10...+55 °C	-10...+55 °C	-10...+55 °C	-10...+55 °C

¹⁾ Limits
Ripple max. 5 V_{SS}
Uv connections reverse polarity protected
Scanning ratio 1:1

¹⁾ Grenzwerte
Restwelligkeit max. 5 V_{SS}
Uv-Anschlüsse verpolsicher
Tastverhältnis 1:1

¹⁾ Valeurs limites
Ondulation résiduelle maxi 5 V_{SS}
Raccordements Uv protégés contre les inversions de polarité
Rapport de détection 1:1

¹⁾ Valores limite /ondulaç ão residual má x.5V_{SS}
Conexões Uv protegidas contra inversã o de polos
Relaç ão de exploraç ao 1:1

¹⁾ Grænseværdier
resterende bølgethed max. 5 V_{SS}
Uv-tilslutninger med polbeskyttelse
Tastforhold 1:1

KT 5					G-2 P1112	G-2 N1112	W-2 P1116	W-2 N1116
Distanza di ricezione	Tastafstand	Alcance de exploración	感知距离	検出距離	10 mm	10 mm	10 mm	10 mm
Punto luminoso	Lichtvlek	Mancha de luz	光斑	スポット	1.2 x 4.2 mm	1.2 x 4.2 mm	1.2 x 4.2 mm	1.2 x 4.2 mm
Tensione di alimentazione U _V ¹⁾	Voedingsspanning U _V ¹⁾	Tensión de alimentación U _V ¹⁾	电源电压 ¹⁾	投入電源電圧 U _V ¹⁾	DC 10...30 V	DC 10...30 V	DC 10...30 V	DC 10...30 V
Uscita di commutazione	Schakeluitgang	Salida de conexión	开关输出端	スイッチング出力	PNP	NPN	PNP	NPN
Sequenza segnali ²⁾	Signalenreeks ²⁾	Secuencia de señales ²⁾	信号流 ²⁾	開閉頻度 ²⁾	10 000/s	10 000/s	10 000/s	10 000/s
Tempo di risposta	Aanspreektijd	Tiempo de reacción	触发时间	応答時間	50 µs	50 µs	50 µs	50 µs
Tipo di protezione	Isolatieklasse	Tipo de protección	保护种类	保護構造(IEC144)	IP 67	IP 67	IP 67	IP 67
Temperatura ambiente circostante	Bedrijfsomgevings-temperatuur	Temperatura ambiente de servicio	工作环境 - 温度	使用周囲温度	-10...+55 °C	-10...+55 °C	-10...+55 °C	-10...+55 °C

¹⁾ Valori limite
ondulazione residua max. 5V_{SS}
Uv-collegamenti con protez. contro inversione di poli

¹⁾ Grenswaarden
rimpel max. 5 V_{SS}
Uv-aansluitingen ompoolbeveiligd

¹⁾ Valores li mite
ondulación residual max. 5 V_{SS}
Conexiones Uv a prueba de inversión de polaridad

¹⁾ 极限值 剩余波纹度 max.5V_{SS}
Uv - 接头防反接

¹⁾ 限界値、リプル最大 5Vpp
電源電圧投入地逆脱保護機能付
ON/OFF 時間比 1:1

²⁾ rapporto di ricezione 1:1

²⁾ Tastverhouding 1:1

²⁾ relación de exploración 1:1

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FRANÇAIS
Détecteur de contrastes avec Teach-in Instructions de Service

Conseils de sécurité

- Lire les Instructions de Service avant la mise en marche.
- Installation, raccordement et réglage ne doivent être effectués que par du personnel qualifié.
- Lors de la mise en service, protéger l'appareil de l'humidité et des saletés.
- N'est pas un composant de sécurité au sens de la directive européenne concernant les machines.

Utilisation correcte

Le détecteur de contraste KT 5-2 est un capteur optoélectronique qui s'utilise pour la saisie optique sans contact de repères lumineux contrastés.

Mise en service

1 Seulement pour les versions à connecter: Le connecteur peut pivoter horizontalement (H) et verticalement (V). Enfiler la boîte à conducteurs sans aucune tension et la visser. Pour le raccordement dans **B** on a: brn=brun, blu=bleu, blk=noir, gra=gris, wht=blanc.
Sorties: Q_{PNP} ou Q_{NPN}. Raccorder le détecteur conformément au schéma de circuit **B**.

2 Temporisation à la retombée; Relais temporisateur (conformément au code des modèles, voir ci-dessous): Choisir le côté de sortie de la lumière, remplacer éventuellement l'objet[ci par un embout vissé d'obturation.

3 Choisir la position de montage de façon que la tache de lumière pénètre longitudinalement dans le repère. Ce faisant, tenir compte du code des modèles, voir ci-dessous; A=longitudinalement, B=transversalement.

4 Installer le capteur; muni de trous de fixation, à l'endroit (par ex. poulie de renvoi) où l'objet à examiner exécute les mouvements latéraux et verticaux les plus faibles. Ce faisant, tenir compte de la distance de détection (voir les caractéristiques techniques à la fin de ces Instructions de Service et voir le diagramme, x=distance de détection, y=sensibilité relative). Compenser les mouvements latéraux et verticaux de l'objet à examiner au moyen de repères de longueur appropriée. Exclure tout mouvement du capteur pouvant influer sur la distance de détection.

5 Dans le cas d'objets à surface brillante ou réfléchissante incliner le capteur de 10° à 15° par rapport à la surface du matériau. Raccorder les conducteurs. ET: Entrée Extern Teach (Apprentissage externe), permet la programmation du seuil de détection au moyen d'un signal externe. Verrouiller le bouton d'apprentissage contre tout accionnement involontaire en réglant sur „RUN“. Si le commutateur se trouve dans une position indéfinie, on ne peut pas déclencher l'apprentissage. Réglage d'immémorisation:

6 **KT 5G-2_ _ _ _ 2 uniquement:** Amener le repère lumineux sur la tache de lumière. Régler le bouton rotatif sur le contraste existant (fine si contraste faible; coarse si contraste élevé). Quand on coupe la tension d'alimentation, le seuil de commutation est conservé. Apprentissage au moyen du bouton d'apprentissage ou du câble de commande, le témoin de fonctionnement s'allume. L'opération d'apprentissage est terminée.

7 **KT 5W-2_ _ _ _ 6 uniquement:** 1ère opération d'apprentissage:Amener le marquage ou le support dans le spot lumineux et déclencher l'apprentissage au moyen du bouton d'apprentissage ou du câble de commande. La lumière rouge émise et le témoin de fonctionnement clignotent lentement.

2ème opération d'apprentissage: Amener le support ou le marquage dans le spot lumineux et déclencher l'apprentissage au moyen du bouton d'apprentissage ou du câble de commande. L'opération d'apprentissage est terminée. Si la lumière rouge émise et le témoin de fonctionnement clignotent rapidement: le contraste n'est pas suffisant.

La commutation claire/sombre s'ajuste automatiquement.

Source lumière	Source Q	Tache	Distance de	Relais temporisateur	Teach-in
G=lumière verte W=lumière rouge, bleue ou verte	P=PNP N=NP	1=longitudinalement 2=transversalement	détection 1=10 mm 2=20 mm 3=40 mm	1=sans nalement 2=20 ms temporisation retombée	2=Apprentissage statique sur le marquage 6=Apprentissage statique sur le marquage et le support

Maintanance

Les détecteurs de lumière SICK ne nécessitent pas d'entretien. Nous recommandons, à intervalles réguliers - de nettoyer les surfaces optiques, - de contrôler les assemblages vissés et les connexions à fiche et à prise.

PORTUGUÊS
Foto-célula de contraste com Teach-in Instruções de operação

Instruções de segurança

- Antes do comissionamento dev ler as instruções de operação.
- Conexões, montagem e ajuste devem ser executados exclusivamente por pessoal devidamente qualificado.
- Guardar o aparelho ao abrigo de umidade e sujidade.
- Não se trata de elemento de segurança segundo a Diretiva Máquinas da União Europeia.

Utilização devida

A foto-célula de contraste KT 5-2 é um sensor opto-elétrônico que é utilizado para a análise ótica, sem contato, de marcas contrastantes.

Comissionamento

1 **Vale somente para as versões com conotores:**

Os conotores dos aparelhos giram na horizontal (H) e na vertical (V). Enfiar a caixa de cabos sem torções e aparafusá-la. Para a ligação elétrica em **B** é: brn=marron, blu=azul, blk=preto, gra=cinzentu, wht=branco.

Saídas: Q_{PNP} e Q_{NPN}. Ligar o sensor conforme o esquema de ligações **B**.

2 Retardo de desacionamento: Elemento temporizador: Selecionar o lado de saída da luz, se for caso disso,

substituir a objetiva por unha rosçada cega.

3 Selecionar a posição de montagem por forma que o ponto de luz se encontre dentro da marcação. Levam em conta o código de tipo, verabaixo; A =ao comprido, B= posição transversal.

4 Montar o sensor executando perfurações no lugar (por ex. rolo de inversão), em que o objeto de controle executa os menores movimentos laterais e de elevação. Atender, durante este processo, ao raio de exploração (ver dados técnicos no fim das presentes instruções de serviço e ver diagrama, x=raio de exploração, y=sensibilidade relativa).

Compensar os movimentos laterais e de elevação do objeto de controle através de marcações de comprimento adequado. Excluir movimentos do sensor; influenciando o raio de exploração.

5 Tratando-se de superfícies de objetos que refletem ou briham inclinar o sensor por 10° até 15° com relação à superfície do material. Fazer a cablagem elétrica. ET: Entrada do sinal externo Teach, para programação do valor limite de ligação através do sinal externo. Bloquear o botão Teach-in mediante „RUN“ contra accionamento involuntário. Se a posição do interruptor for indefinida, não será possível accionar o Teach-in. Regulação da memória:

6 **Só KT 5G-2_ _ _ _ 2:**

Colocar marca no ponto luz.

Regulação do cabeçal de rotação ao contraste existente (de precisão, com pequenos contrastes; aproximado com grandes contrastes). Depois de desligada a tensão de alimentação, permaneça a soleira de comutação. Teach-in através de botão Teach-in ou circuito de comando, o indicador de funcionamento acende-se. Processo Teach-in terminado.

7 **Só KT 5W-2_ _ _ _ 6:**

1. Processo Teach-in: colocar a marca ou background no ponto luminoso e Teach-in mediante botão Teach-in ou circuito d comando. A luz vermelha de emissão e a indicação de funcionamento piscam lentamente.
2. Processo Teach-in: colocar a marca ou background no ponto luminoso e Teach-in mediante botão Teach-in ou circuito de comando. Processo Teach-in terminado. Se a luz vermelha de emissão e a indicação de funcionamento piscarem rapidamente: contraste insuficiente. A comutação claro/escura é adaptada automaticamente.

Fonte luminosa	Saída Q	Ponto luminoso	Campo de exploração	Elemento temporizador	Teach-in
G=luz verde W=luz vermelha, azul ou verde	P=PNP N=NP	1=Posição horizontal 2=Posição transversal	1=10 mm 2=20 mm 3=40 mm	1=sem 2=20 ms Retardo de desacionamento	2= Teach-in estático na marca 6= Teach-in estático na marca e no background

Manutenção

Os sensores de luz SICK não requerem manutenção. Recomendamos que se faça, em intervalos regulares, - a limpeza das superfícies óticas, - e um controle às conexões rosçadas e uniões de conotores.

DANSK
Kontrastknap med Teach-in Driftsvejledning

Sikkerhedsforskrifter

- Driftsvejledningen skal gennemlæses før idrifttagning.
- Tilsutning, montage og installation må kun foretages af fagligt personale.
- Apparatet skal beskyttes mod fugtighed og snavs ved idrifttagningen.
- Ingen sikkerhedskomponent iht. EU-maskindirektiv.

Beregnet anvendelse

Kontrasttasteren KT 5-2 er en opto-elektronisk føler; som benyttes til optisk, berøringsløs registrering af kontrastmærker.

Ildrifttagning

1 **Kun ved stikversionerne:**

Apparatstik kan svinges horisontalt (H) og vertikalt (V). Ledningsdåse monteres spændingsfri og skrues fast. For tilslutning i **B** gælder: brn=brun, blu=blå, blk=sort, gra=grå, wht=hvid. Udgange: Q_{PNP} og Q_{NPN}. Knap tilsluttet iht. tilslutningsskema **B**.

2 Forsinket frafald; Tidsled (svarer til typenøgle, se nedenfor). Lysudtrængningsside vælges hhv. objektiv udskiftes med blindskru.

3 Montageposition vælges, således at lysplet trænger ind i markeringen på langs.Vær opmærksom på typenøgle, se nedenfor; A=på langs, B=på tværs.

4 Sensor monteres med montagehuller på et sted (f.eks. styrrulle), hvor kontrolobjektet udfører de mindste side- og højdebevægelser.Vær opmærksom på tastvidde (se tekniske data i slutningen af nærværende driftsvejledning og se diagram, x=tastvidde, y=relativ modtagelighed). Kontrolobjektets side- og højdebevægelser udlignes med tilsvarende lange markeringer. Sensorens bevægelser udslukkes med tastvidde-påvirkning.

5 Ved spejlende eller glimrende objektoverflader skal føleren have en hældning på 10° til 15° i forhold til materialets overflade. Ledninger tilsluttet. ET: Indgang Extern Teach, til programmering af kontakttærskel via eksternt signal. Teach-in-knappen skal spærres med „RUN“ mod utilsigtet indkobling.Ved en udefineret kontaktstilling kan der ikke udløses noget Teach-in. Indstilling lagring:

6 **Kun KT 5G-2_ _ _ _ 2:**

Mærke bringes i lys plet.

Redeknap indstilles på foreliggende kontrast (fine ved små kontraster; coarse ved store kontraster). Når der er slukket for forsyningsspændingen, bibeholdes koblingstærsklen. Teach-in lyser over Teach-in-knappen eller styrelædningen, funktionsvisningen lyser. Teach-in-processen er afsluttet.

7 **Kun KT 5W-2_ _ _ _ 6:**

1. Teach-in-proces: Bring mærket eller undergrunden ind i lyspletten og aktiver Teach-in over Teach-in-knappen eller styrelædningen. Det røde sendelys og funktionsvisningen blinker langsomt.

2. Teach-in-proces: Bring undergrunden eller mærket ind i lyspletten og aktiver Teach-in over Teach-in-knappen eller styrelædningen. Teach-in-processen er afsluttet. Det røde sendelys og funktionsvisningen blinker hurtigt; Kontrasten er ikke tilstrækkelig.

Lys-/mørkeskift tilpasses automatisk.

Lyskilde	Udgang Q	Lysplet	Tastvidde	Tidsled	Teach-in
G=grønt lys W=rødt, blåt eller grønt lys	P=PNP N=NP	1=på langs 2=på tværs	1=10 mm 2=20 mm 3=40 mm	1=uden 2=20 ms Forsinket frafald	2=statisk Teach-in på mærket 6=statisk Teach-in på mærket og undergrunden

Vedligeholdelse

SICK-fotoceller kræver ingen vedligeholdelse.Vi anbefaler; at - de optiske grænseflader rengøres - forskruninger og stikforbindelser kontrolleres med regelmæssige mellemrum.

ITALIANO
Sensore di contrasto con Teach-in Istruzioni per l'uso

Avvertimenti di sicurezza

- Leggere prima della messa in esercizio.
- Allacciamento, montaggio e regolazione solo da parte di personale qualificato.
- Durante la messa in esercizio proteggere da umidità e sporcizia.
- Non componente di sicurezza secondo la Direttiva macchine EN.

Impiego conforme allo scopo

Il sensore di contrasto KT 5-2 è un sensore optoelettronico che viene impiegato per il rilevamento ottico a distanza di marchi di contrasto.

Messa in esercizio

1 **Solo con spine:**

Spina apparecchio orientabile in orizzontale (H) e in verticale (V). Inserire scatola esente da tensione e avvitare stringendo. Per collegamento **B** osservare: brn=marrone, blu=blu, blk=nero, gra=grigio, wht=bianco. Uscite: Q_{PNP} o Q_{NPN}. Collegare il sensore secondo lo schema **B**.

2 Ritardo di caduta;Temporizzatore (secondo codice modello, v. sotto).

Scegliere il lato di uscita luce, sull'altro lato sostituire l'obiettivo con un tappo a vite.

3 Effettuare il montaggio in modo che il punto luminoso entri nell'apposita demarcazione nel senso della lunghezza. Attenenersi a quanto indicato nel codice modello, v. sotto; A= senso della lung., B=senso trasv.

4 Montare il sensore con i fori di fissaggio nel punto (ad es. carrucola di rinvio) in cui l'oggetto effettua meno movimenti orizzontali e verticali. Tenere conto della distanza di ricezione (cf. Scheda tecnica alla fine di queste Istruzioni e v. diagramma, x=distanza di ricezione, y=sensibilità relativa).

Compensare i movimenti orizzontali e verticali dell'oggetto tramite demarcazioni di lunghezza adeguata. Escludere movimenti del sensore che possano influenzare la distanza di ricezione.

5 Con superfici riflettenti oppure brillanti inclinare di 10° - 15° rispetto alla superficie dell'oggetto. Collegare i cavi. ET: Entrata Extern Teach, per la programmazione del limite di commutazione tramite segnale esterno.

Bloccare il tasto di Teach-in contro l'attivazione involontaria con „RUN“. Quando la posizione dell'interruttore non è definita non è possibile iniziare un Teach-in.

Impostazione. memoria:

6 **Solo KT 5G-2_ _ _ _ 2:** Portare la demarcazione sul punto luminoso. Impostare con la manopola il contrasto effettivo: (fine se il contrasto è ridotto; coarse se è forte). Dopo il disinserimento della tensione di alimentazione il limite di commutazione resta conservato. Teach-in tramite tasto Teach-in oppure cavo di comando, la spia di esercizio è accesa. Il procedimento di Teach-in è finito.

7 **Solo KT 5W-2_ _ _ _ 6:**

1. Procedimento Teach-in: Posizionare la marca oppure lo sfondo nella macchia luminosa ed effettuare il Teach-in con il tasto di Teach-in oppure il cavo di comando. La luce rossa di trasmissione e la spia di esercizio lampeggiano lentamente.

2. Procedimento Teach-in: Posizionare la marca oppure lo sfondo nella macchia luminosa ed effettuare il Teach-in con il tasto di Teach-in oppure il cavo di comando. Se la luce rossa di trasmissione e la spia di esercizio lampeggiano rapidamente il contrasto non è sufficiente. Commutazione chiaro/scuro viene adattata automaticamente.

Fonte di luce	Uscita Q	Punto luminosa	Distance di ricezione	Temporizzatore	Teach-in
G=luce verde W=luce rossa, azzura oppure verde	P=PNP N=NP	1=senso della lung 2=senso transv.	1=10 mm 2=20 mm 3=40 mm	1=senza 2=20 ms Ritardo di caduta	2= Teach-in statico su marca 6= Teach-in statico su marca e sfondo

Manutenzione

Le barriere luminose SICK non richiedono manutenzione. Si consiglia - di pulire regolarmente le superfici ottiche limite, - di controllare regolarmente gli avvitamenti e i collegamenti a spina.

NEDERLANDS
Fotocel met Teach-in Gebruiksaanwijzing

Veiligheidsvoorschriften

- Lees voor de ingebruikneming de gebruiksaanwijzing.
- Aansluiting, montage en instelling alleen door vakbekwaam personeel laten uitvoeren.
- Apparaat voor ingebruikneming tegen vocht en verontreiniging beschermen.
- Geen veiligheidscomponent conform EU-machinerichtlijn.

Gebruik volgens bestemming

De drukmerkentaster KT 5-2 is een optisch-elektronische sensor en wordt gebruikt voor het optisch, contactloos registreren van drukmerken.

Ingebruikneming

1 **Alleen bij de connectorversies:**

Connector-aansluiting horizontaal (H) en verticaal (V) draaibaar: Connector spanningsloos monteren en vastschroeven.

Voor de aansluiting in **B** geldt: brn=bruin, blu=blauw, blk=zwart, gra=gris, wht=wit. Uitgangen: Q_{PNP} o Q_{NPN}. Fotocel volgens aansluitschema **B** aansluiten.

2 Afvalvertraging zie; Tijdelement (voor de betr. typesleutel, z.o.). Lichtuitstraalzijde kiezen, indien nodig objectief vervangen door een blinde schroefverbinding.

3 Inbouwlengte zo uitkiezen dat de lichtvlek in de lengte in de markering valt. Houd rekening met de typesleutel, zie onder; A=in de lengte, B=dwars.

4 Systeem met bevestigingsgaten daar (bijv. leidschijf) bevestigen, waar het proefobject de minste horizontale en verticale bewegingen maakt. Houd rekening met de tastafstand (zie technische gegevens op het einde van deze gebruiksaanwijzing en zie diagram, x=tastafstand, y=relatieve gevoeligheid).

Compenseer horizontale en verticale bewegingen van het proefobject met overeenkomstig lange markeringen. Vermijd bewegingen van het systeem met tastafstandinvloed.

5 Bij spiegelende of glanzende oppervlakken de sensor met 10° tot 15° t.o.v. het oppervlak laten hellen.

Kabels aansluiten.

ET: Ingang Extern Teach, voor het met een extern signaal programmeren van de schakeldrempel.

Blokkeer de Teach-in knop tegen onopzettelijke bediening met „RUN“. Bij een ongedefinieerde schakelaarstand kan geen Teach-in worden geactiveerd.

Instelling opslag:

6 **Alleen KT 5G-2_ _ _ _ 2:** Marker in lichtvlek brengen. Draaiknop instellen op het beschikbare drukmerk (fine bij kleine drukmerken; coarse bij grote drukmerken).

Na het uitschakelen van de voedingsspanning blijft de schakeldrempel gehandhaafd. Teach-in via Teach-in-knop of stuurleiding, werkingsindicatie brandt. Teach-in-proces beëindigd.

7 **Alleen KT 5W-2_ _ _ _ 6:**

1. Teach-in-proces: Merkteken of ondergrond in de lichtvlek brengen en Teach-in via Teach-in-knop of stuurleiding. Het rode zenderlicht en de werkingsindicatie knipperen langzaam.

2. Teach-in-proces: Ondergrond of merkteken in in de lichtvlek brengen en Teach-in via Teach-in-knop of stuurleiding. Teach-in-proces beëindigd. Wanneer het rode zenderlicht en de werkingsindicatie snel knipperen, dan is er niet voldoende contrast.

Helder/donker omschakelen wordt automatisch aangepast.

Lichtbron	Uitgang Q	Lichtvlek	Tastafstand	Tijdelement	Teach-in
G=Groen licht W=Rood, blauw of groen licht	P=PNP N=NP	1=verticaal 2=dwars	1=10 mm 2=20 mm 3=40 mm	1=zonder 2=20 ms Afvalvertraging	2=statisch Teach-in op merkteken 6=statisch Teach-in op merkteken en ondergrond

Onderhoud

SICK-reflextasters zijn onderhoudsvrij.Wij bevelen aan, regelmatig - de optische grensvlakken schoon te maken, - schroef - en connectorverbindingen te controleren.

ESPAÑOL
Palpador de contraste con Teach-in Manual de Servicio

Observaciones sobre seguridad

- Leer el Manual de Servicio antes de la puesta en macrch.a.
- Conexión, montaje y ajuste solo por personal técnico.
- A la puesta en marcha proteger el aparato contra humedad y suciedad.
- No es elemento constructivo de seguridad según la Directiva UE sobre maquinaria.

Empleo para usos debidos

El palpador de contraste KT 5-2 es un sensor opto-electrónico empleado para la detección óptica y sin contacto de marcas de contraste.

Puesta en marcha

1 **Solo en conectores:**

Conector del aparato orientable en horizontal (H) y vertical(V). Insertar y atornillar bien la caja de conexiones sin tensión. Para conectar en **B**: brn=marrón, blu=azul, blk=negro, gra=gris, wht=blanco. Salidas: Q_{PNP} y Q_{NPN}. Conectar el palpador de acuerdo al esquema de conexiones **B**.

2 Abertura retardada: Elemento temporizador (aplicar de acuerdo a la clave de tipos, ver abajo).

Selecionar el lado de salida de la luz, en caso dado,

recambiar el objetivo por atomilladura ciega.

Elegir la posición de montaje de forma que la mancha de luz caiga longitudinalmente en la marca.Tener en cuenta la clave de tipos, ver abajo; A=longitudinal, B=transversal.

4 Montar el sensor con las perforaciones de fijación en el lugar (p.ejem. polea de reenvío) donde los objetos a controlar ejecuten el menor movimiento lateral y de altura. Tener en cuenta aquí el alcance de exploración (ver características técnicas al final del Manual de Servicio y el diagrama, x=alcance de exploración, y=sensibilidad relativa). Compensar los movimientos laterales y de altura de los objetos a controlar mediante marcas correspondiente-mente largas. Excluir movimientos del sensor con influencia de aplitud de exploración.

5 Con superficies de objetos reflectantes o brillantes inclinar el sensor entre 10° y 15° hacia la superficie del material. Conectar los conductores. ET: Entrada Extern Teach, para programación del umbral de conexión a través de señal externa. Bloquear el botón de „Teach-in“ mediante „RUN“ contra un accionamiento involuntario. En caso de una posición indefinida del conmutador, no puede activarse la función de „Teach-in“.

Ajuste memorización:

6 **Solo KT 5G-2_ _ _ _ 2:** Colocar la marca en la mancha de luz.Ajustar el botón giratorio al contraste existente (fine para contrastes bajos; coarse para contrastes fuertes). Después de desconectar la tensión de alimentación, se conserva el umbral de conmutación. „Teach-in“ a través del botón de „Teach-in“ o la línea de control, la indicación de funcionamiento está encendida. El proceso de „Teach-in“ ha finalizado.

7 **Solo KT 5W-2_ _ _ _ 6:**

1. Proceso de „Teach-in“: Posicionar la marca o el fondo en el punto luminoso y efectuar el „Teach-in“ a través del botón de „Teach-in“ o la línea de control. La lámpara roja de emisión y la indicación de funcionamiento parpadean lentamente.

2. Proceso de „Teach-in“: Posicionar el fondo o la marca en el punto luminoso y efectuar el „Teach-in“ a través del botón de „Teach-in“ o la línea de control. El proceso de „Teach-in“ ha finalizado. Si la lámpara roja de emisión y la indicación de funcionamiento parpadean rápidamente: el contraste no es suficiente. La conmutación claro/oscuro es adaptada automáticamente.

Fuente de luz	Salida Q	Mancha de luz	Alcance de exploración	Elemento temporizador	Teach-in
G=luz verde W=luz roja, azul o verde	P=PNP N=NP	1=a lo largo 2=a través	1=10 mm 2=20 mm 3=40 mm	1=sin 2=20 ms Abertura retardada	2=Teach-in estático en marca 6=Teach-in estático en marca y fondo

Mantenimiento

Los detectores fotoeléctricos SICK están libres de manimiento. Recomendamos a intervalos regulares - limpiar las superficies ópticas limítrofes, - limpiar los prensaestopas y las conexiones de enchufe.

日本語
対比度探測器 有 Teach In 功能 操作规程

安全使用说明

- 使用前阅读操作规程。

- 只允许专业人员进行接线,安装及调整。

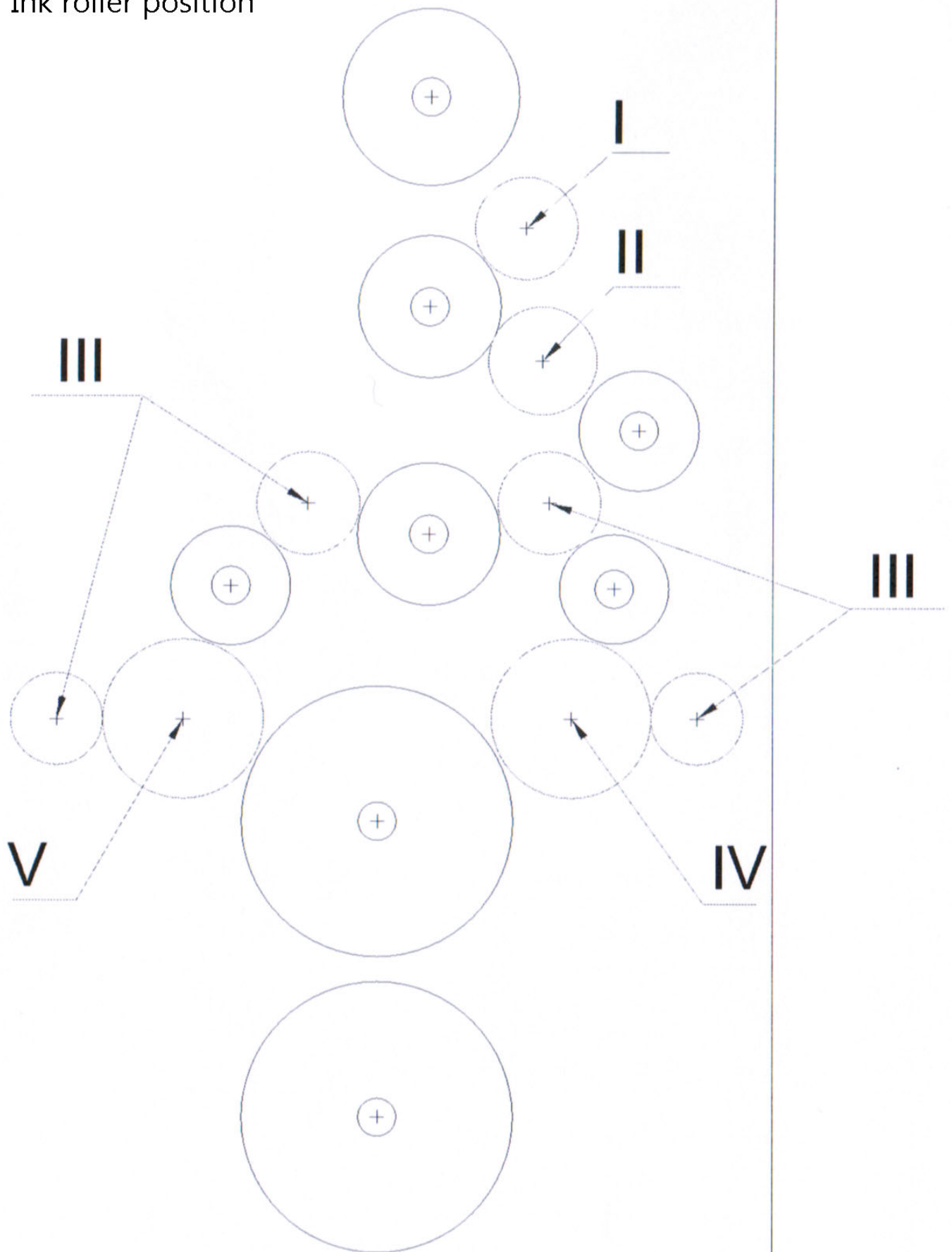
- 使用时应防潮防静电污染。

- 按照 EU- 机器规程无保护元件。

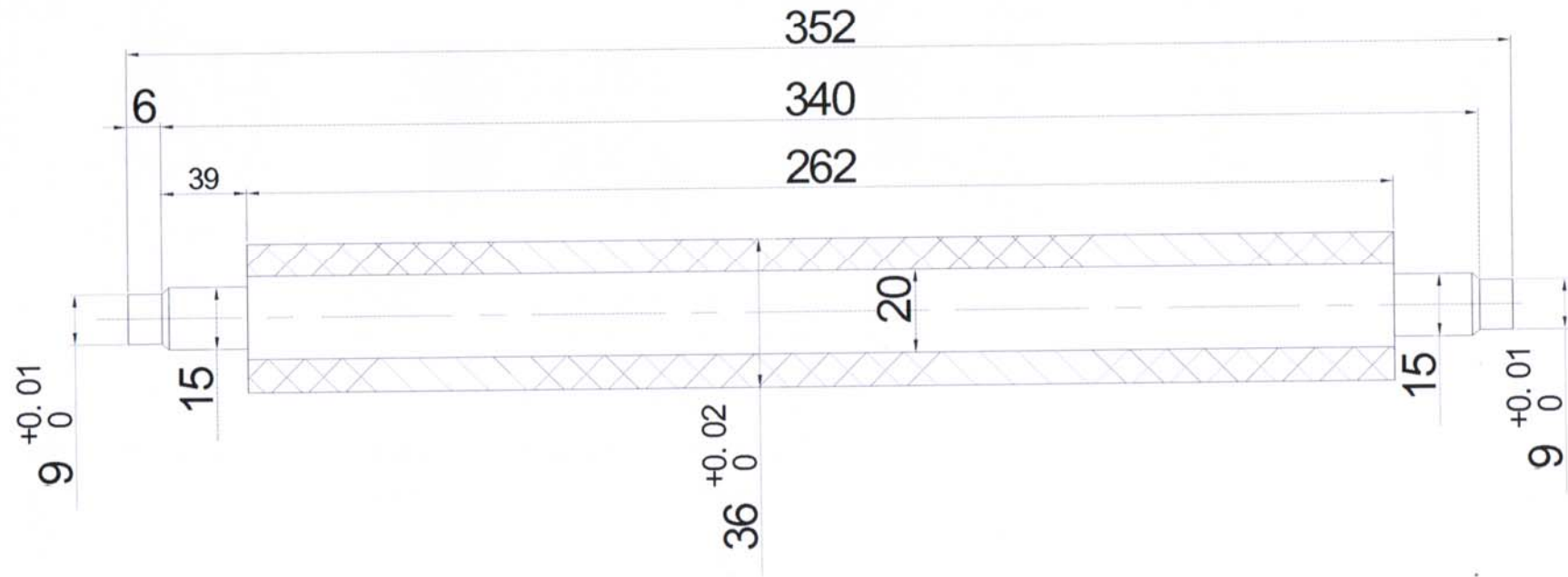
参量使用

KT 5-2 对比度探测器是一种光电式

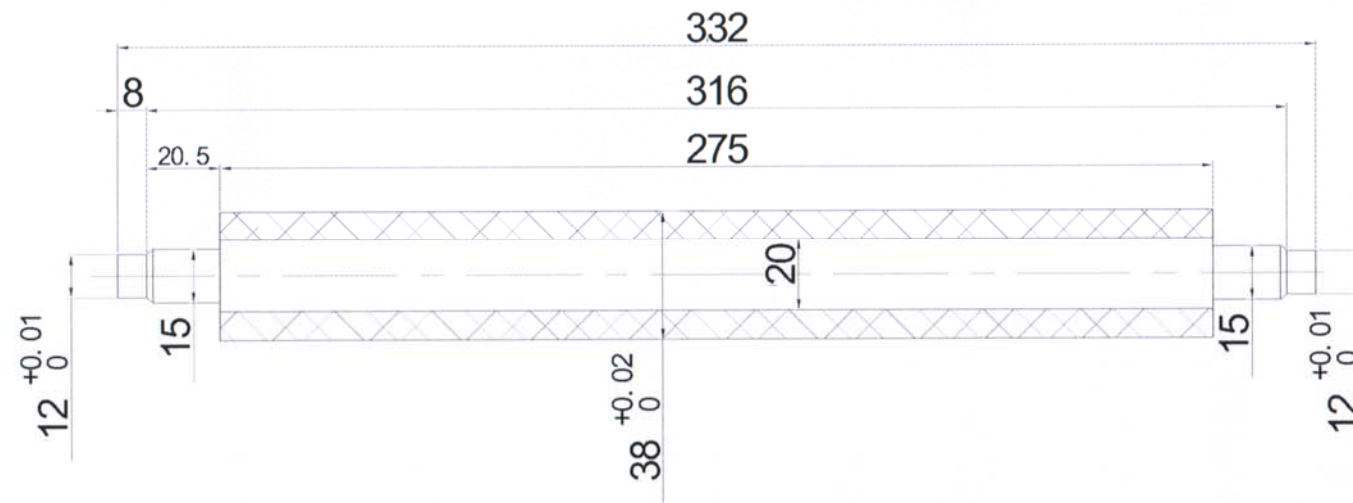
Ink roller position



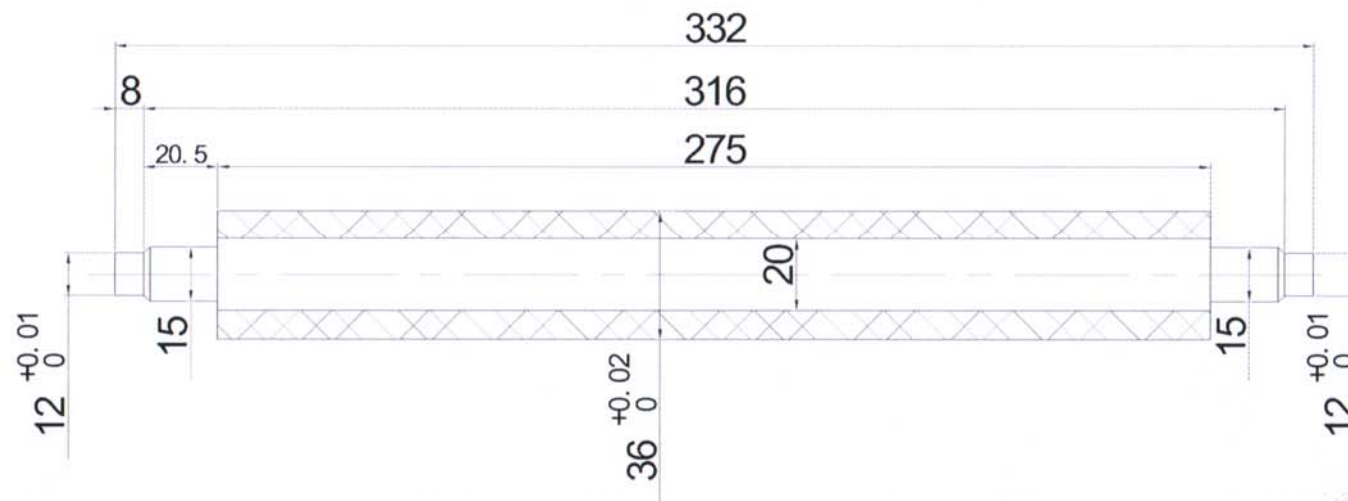
┆ : rubber cylinder 1



II : rubber cylinder 2



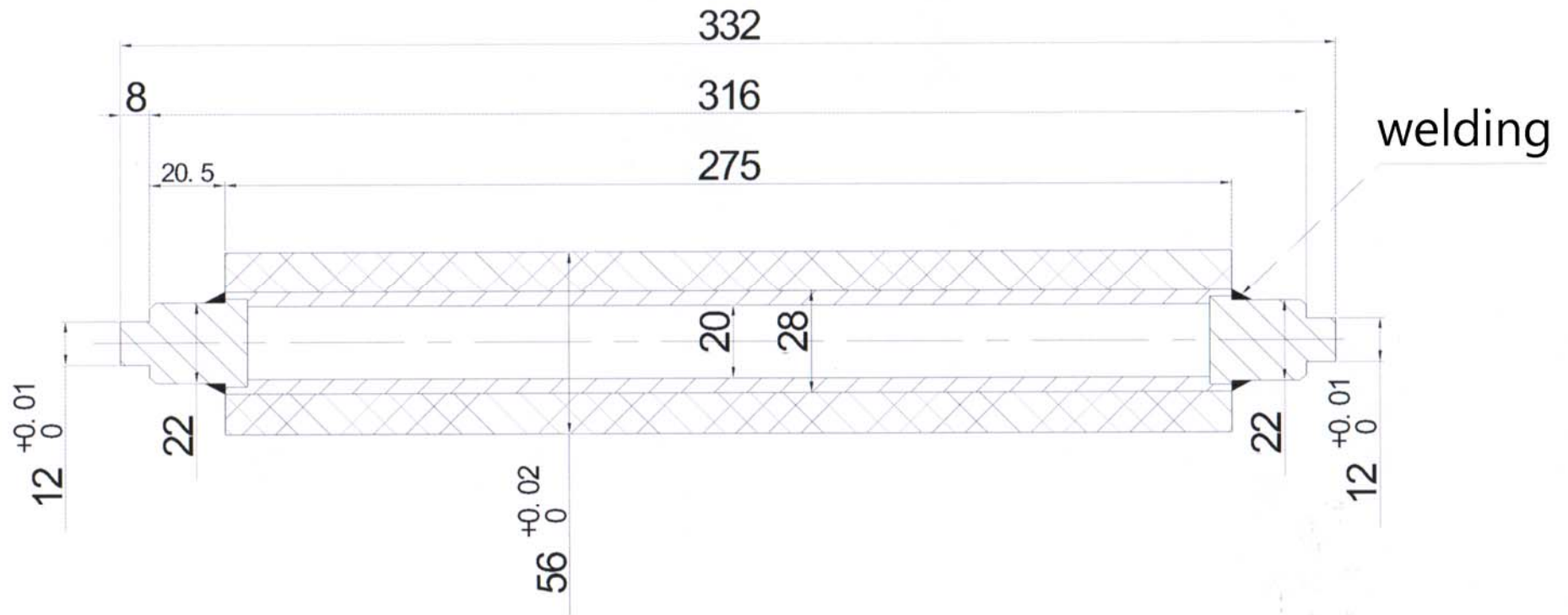
III : rubber cylinder 3



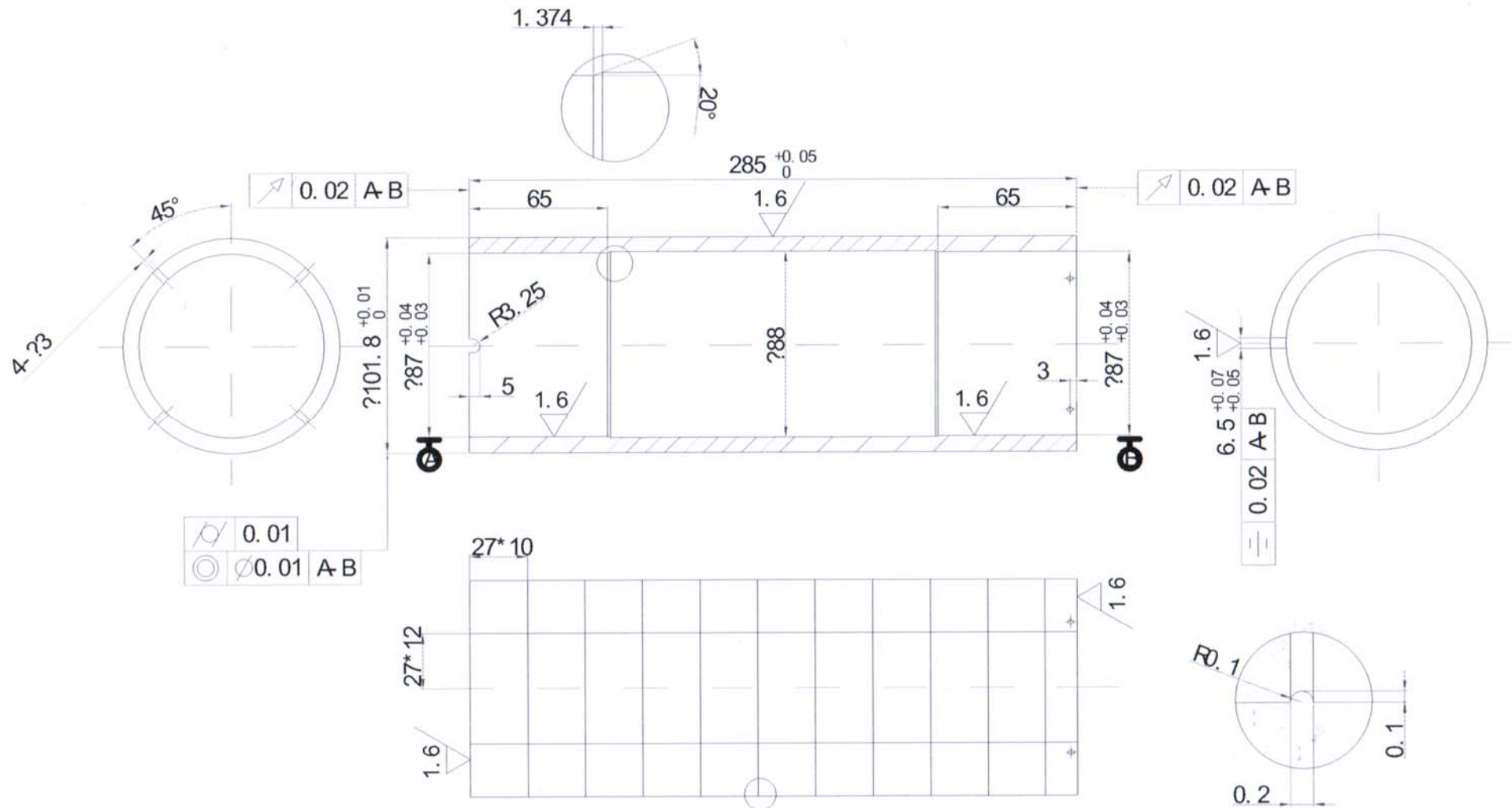
IV: rubber cylinder 4



V : rubber cylinder 5



Print cylinder drawing



The reduction distorting is of 98.4281%

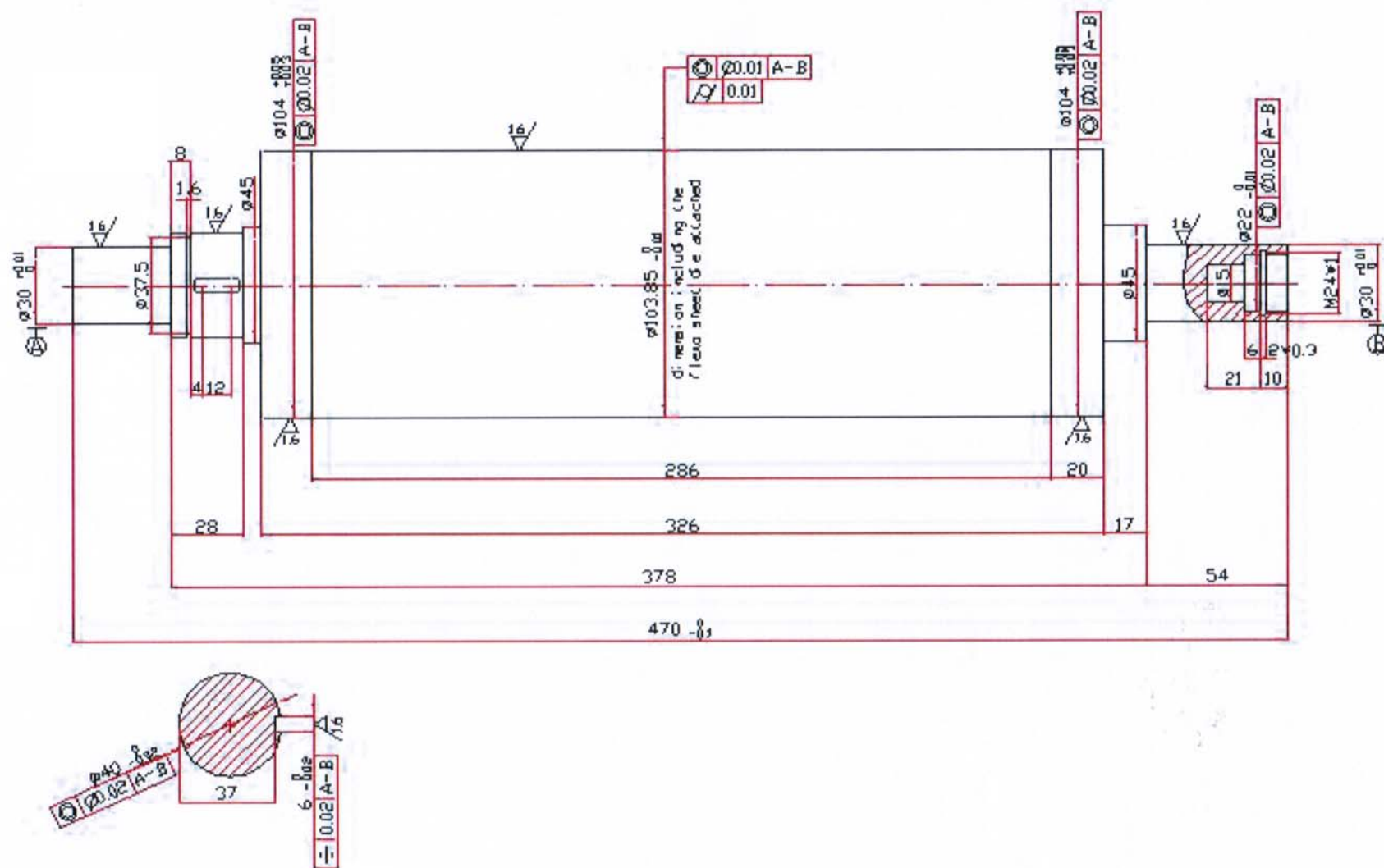
Clichés standard 0.92 mm
Double adhesiv 0.10 or 0.20 mm

Print cylinder details

Technical data:

1. Not indicated break edges 1*45
2. Material 40 Cr
3. Work piece hardening and tempering HB247-271
4. Over all hardening and tempering HRC42-45
5. External surface (excircle; position at 101.08)

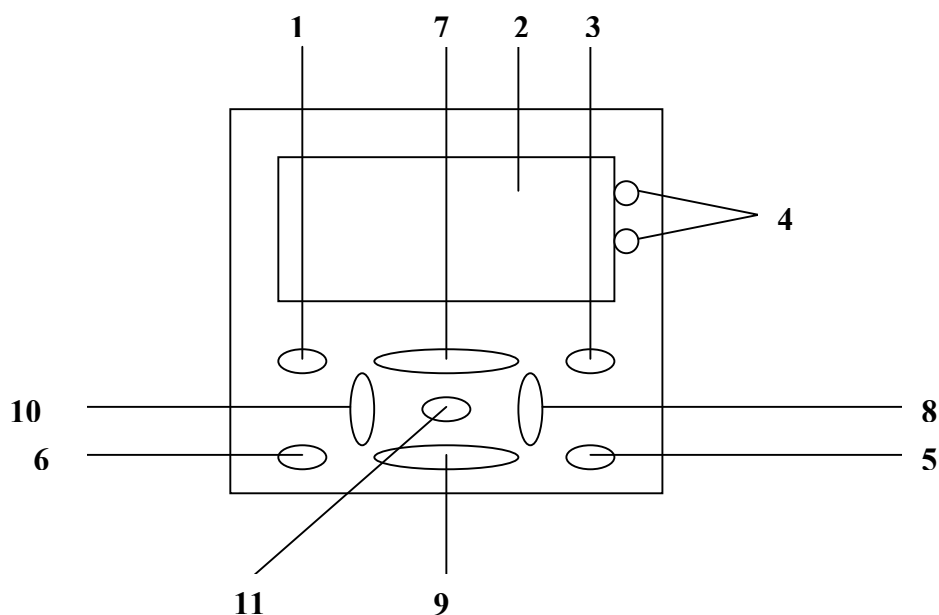
is plated with hardening chromium, the chromium thickness is not less than 0.05mm after finish machining



TERMINALE COLD FOIL

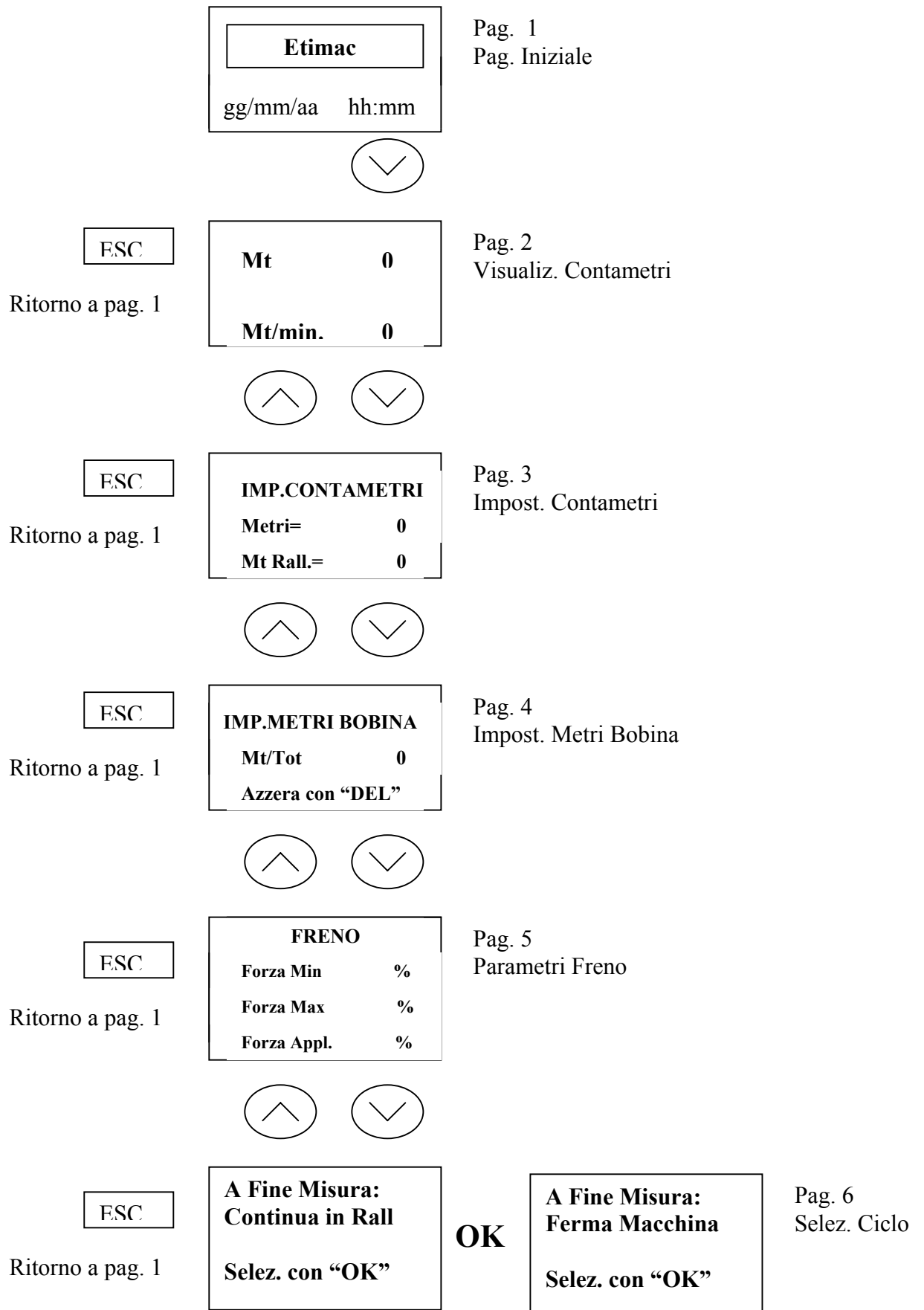
Il Terminale grafico è un apparecchio di visualizzazione, gestione e comando in una sola unità che consente di risolvere diverse applicazioni nell'utilizzo della macchina.

PANORAMICA DEL TERMINALE



- 1 - Tasto "DEL"
- 2 - Display grafico
- 3 - Tasto "ALT"
- 4 - LED di segnalazione
- 5 - Tasto "MODE" "*"
- 6 - Tasto "ESC" (pag. iniziale)
- 7 - Tasto cursore in alto (pag. precedente)
- 8 - Tasto cursore a destra
- 9 - Tasto cursore in basso (pag. successiva)
- 10 - Tasto cursore a sinistra
- 11 - Tasto "OK"

PANORAMICA PAGINE



FUNZIONAMENTO

<table border="1"><tr><td>Etimac</td></tr></table>	Etimac
Etimac	
gg/mm/aa hh:mm	

Pag. 1
Pag. Iniziale

- Dalla pagina iniziale premere il tasto cursore in basso per accedere alla pagina **“visualizzazione contametri”**

Mt	0
Mt/min.	0

Pag. 2
Visualiz. Contametri

- Premere il tasto cursore in basso per accedere alla pagina **“impostazione contametri”**.

IMP.CONTAMETRI	
Metri=	0
Mt Rall.=	0

Pag. 3
Impost. Contametri

Per impostare procedere come descritto in seguito:

- Premere “OK” e selezionare con i tasti cursore in alto o in basso il parametro che si desidera impostare (il parametro lampeggia)
- Premere “OK”, con i tasti cursore a destra e a sinistra posizionarsi sulla cifra da modificare (lampeggia); con i tasti cursore in alto e in basso impostare la cifra
- Premere “OK” per confermare
- Premere “ESC” per uscire dalla modalità impostazione (i due parametri non lampeggiano)

IMP.METRI BOBINA	
Mt/Tot	0
Azzera con "DEL"	

Pag. 4
Impost. Metri Bobina

Con il tasto cursore in basso si accede alla pagina **"impostazione metri bobina"**; per impostare la misura:

- Premere "OK", il parametro da impostare lampeggia
- Premere "OK", con i tasti cursore a destra e a sinistra posizionarsi sulla cifra da modificare (lampeggia); con i tasti cursore in alto e in basso impostare la cifra
- Premere "OK" per confermare
- Premere "ESC" per uscire dalla modalità impostazione (il parametro non lampeggia)
- Mt/Tot. visualizza la lunghezza totale delle lavorazioni eseguite; se la si vuole azzerare basta premere il tasto "DEL". In questo modo si azzerava sia la lunghezza totale, sia la lunghezza parziale

FRENO	
Forza Min	%
Forza Max	%
Forza Appl.	%

Pag. 5
Parametri Freno

- Nella pagina successiva **"parametri freno"** è possibile impostare la forza da applicare al freno. La forza applicata al freno è direttamente proporzionale alla lunghezza della bobina: il sistema applica una forza maggiore al freno quando la bobina è piena; man mano che la lunghezza della bobina diminuisce; diminuisce di conseguenza la forza applicata al freno. La forza applicata viene visualizzata in %.

N.B. E' importante impostare la forza minima minore della forza massima.

- L'impostazione della forza minima e massima si può effettuare nello stesso modo descritto in precedenza.

A Fine Misura: Continua in Rall Selez. con "OK"	OK	A Fine Misura: Ferma Macchina Selez. con "OK"

Pag. 6
Selez. Ciclo

- Nella pagina **"Selezione Ciclo"** è possibile decidere se far fermare la macchina o se (premendo "OK") continuare in rallentamento. In questo caso il rallentamento continuerà fino a quando non si andrà a premere il pulsante verde "MARCIA" sulla pulsantiera.

I “Led” sulla destra del display indicano:

- Verde lampeggiante : macchina da ripristinare (con eventuale messaggio)
- Verde fisso : macchina pronta
- Rosso lampeggiante : presenza di allarmi

ALLARMI

Si possono verificare diversi allarmi:

- EMERGENZA INSERITA (ripristinare il pulsante di emergenza a fungo sulla pulsantiera)
- INTERVENTO MICRO SICUREZZE (finecorsa di sicurezza aperti)
- SCATTO TERMICO O BLOCCO INVERTER (intervento salvamotore o inverter per sovracorrente)
- FINE BOBINA (fine bobina)

La presenza di allarmi causa il suono della sirena. La visualizzazione è possibile oltre che con il led rosso lampeggiante premendo il tasto “ALT”; in questo caso premere il viene visualizzato l’ ultimo allarme presente.

Ripristinare l’allarme e premere “ESC” per tornare alla pagina iniziale.

PAGINE RISERVATE

ACCESSO PAGINE RISERVATE

Premi “ESC” per
Uscire

- Dalla pagina “Selezione Ciclo” premendo il tasto * si accede alla “Pagina Riservata”
- Premere nuovamente il tasto * si accede alla pagina di stato INPUT/OUTPUT
- Premere il tasto “OK” e selezionare “PARAMETRI” con i tasti cursore in alto o in basso e premere “OK”

In questa pagina i parametri sono seguiti da un segno + o – che stanno ad indicare i parametri che si possono modificare (+) e quelli non modificabili (-)

In questa pagina è possibile impostare:

T 01 – tempo sirena avviamento

T 02 – ritardo impulso sensore scambio

T 03 – tempo massimo della rotazione dello scambio (sicurezza in mancanza del sensore)

T 09 – tempo sirena in caso di allarme

DB08 – impostazione velocità massima della macchina

L'impostazione dei parametri è la stessa descritta nelle altre pagine.

Impostazione parametri moltiplicatore/divisore contametri

In caso di Encoder 500 imp/giro:

Moltiplicatore DB07 = 1

Divisore AR05 = 1901

In caso di sensore con stella 4 imp/giro:

Moltiplicatore DB07 = 10

Divisore AR05 = 152

Per uscire dalla programmazione premere “OK”

Per uscire dal parametro premere “ESC”

Premere “ESC” seguito dal tasto * per tornare alla “Pagina Riservata”

Premere “ESC” per tornare alla pagina iniziale

Calcolo del divisore	$\frac{\text{imp/giro} \times 1}{\text{mt/giro}}$	=	$\frac{500 \times 1}{0,263}$	=	1901
Es. Encoder					

Calcolo del divisore	$\frac{\text{imp/giro} \times 10}{\text{mt/giro}}$	=	$\frac{4 \times 10}{0,263}$	=	151,68 = 152
Es. stella 4 imp/giro					

INSTRUCTION MANUAL GLOBAL SERIES CLUTCH

Model: GCA, GCAM, GCB, GCBM, GCC, GCCM, GCD, GCDM

CAUTION: This product contains rotating parts which could cause injury at time of installation. Appropriate protective guards should be installed by the user according to his use of this product.

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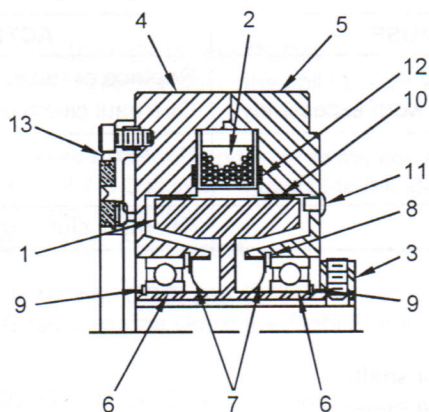
Periodically there will be updates to this manual. The latest version is available at www.magpowr.com or by calling 1-800-MAGPOWR (624-7697).

THEORY OF OPERATION

The clutch construction consists of two stators, a rotor, a coil assembly, a slip ring, magnetic powder and two bearings. The bearings support and align the rotor within the stators, and allow the rotor to rotate within the clutch assembly. The stator is also allowed to rotate via the slip rings. The magnetic powder occupies the space between the stator and the rotor, and represents a key element in the operation of the clutch.

The right stator is connected to the driving input member. The rotor is connected to a rotating machine shaft. The magnetic powder functions as the adjustable bond or link between the stators and the rotor, and is the medium for the transmission of torque.

An electric current in the coil creates a magnetic flux field, which passes through the stator, magnetic powder, and the rotor. The flux aligns the powder particles, forming a bond or link between the stators and the rotor. The strength of the bonding action (torque) is proportional to the amount of current in the coil.



PARTS LIST

- | | |
|------------------|--|
| 1 Rotor Assembly | 7 Powder Seals |
| 2 Coil | 8 Internal Snap Rings |
| 3 Collar | 9 External Snap Rings |
| 4 Left Stator | 10 Magnetic Powder |
| 5 Right Stator | 11 Powder Fill Screw (and washer for GCA, GCAM, GCB & GCBM only) |
| 6 Bearings | 12 Coil Gaskets |
| | 13 Slip Ring Assembly |

MECHANICAL INSTALLATION

1. The rotor shaft centerline must be mounted within 30° of the horizontal plane.
2. Prior to installation, manually check the rotation of the rotor, and observe that it is smooth and free of binding or scraping.
3. Mount the clutch on the shaft and tighten the two set screws.
4. Attach a drive mechanism to the right stator via the mounting rabbet and bolt pattern.
5. Position the brush block assembly so that the brushes are centered on the slip rings. There should be a .06 in [1.5 mm] to .125 in [3.2 mm] gap between the slip ring surface and the brush block housing.

ELECTRICAL INSTALLATION

Connect the control output wires to the brush block assembly per the Brush Block Instruction Manual.

Note: The clutch coil system has been changed from Class A to Class F. Refer to the nameplate on your unit to determine which insulation class you have. If you have Class F insulation, the nameplate will denote Class F. If you have Class A, there will be no notation on the nameplate.

MAXIMUM CURRENT, ADC				
Supply Voltage, vdc				
0 - 24 0 - 90				
Model	Class A	Class F	Class A	Class F
GCA, GCAM	0.94	1.28	0.25	0.28
GCB, GCBM	1.06	1.70	0.28	0.37
GCC, GCCM	1.56	2.06	0.42	0.55
GCD, GCDM	2.03	2.68	0.54	0.69

ENVIRONMENTAL SPECIFICATIONS

Temperature Range:

Operating 0°C to 40°C
Storage -30°C to +80°C

Relative Humidity: 5% to 80%

Pollution Degree: 2 (IEC664-1)

Altitude: 0-2000 meters

MAINTENANCE

Due to its small number of moving components and its basic design, maintenance of the brake is generally necessary only after extended service. When a problem appears in the system, ensure that all couplings, belts, etc., and the control device are functioning properly. Use the Troubleshooting guide below to determine the cause of the problem. The clutches can be rebuilt with a repair kit which puts it into "as new" condition. A repair kit includes a new powder charge and the appropriate bearings, seals and snap rings which are generally needed to rebuild the unit.

NOTE: When ordering parts not contained in the kit, provide the model number, serial number and parts list item number.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	ACTION
Insufficient Torque	Power supply voltage output low. Magnetic powder has been worn excessively.	Replace or repair control. Overhaul clutch using repair kit.
Load operates in an intermittent manner with proper voltage	Coil is intermittently open.	Replace coil.
Clutch is noisy and has vibration.	Bearings are worn.	Overhaul clutch using repair kit.

DISASSEMBLY - Refer to Figure 1

1. Remove the set screws and Collar from the rotor shaft.
2. Remove the External Snap Rings from both sides of the rotor shaft.
3. Remove the three screws which hold the Slip Ring to the Left Stator.
4. Remove the two screws which hold the lead wires to the back of the Slip Ring. Straighten the ends of the lead wires.
5. Remove the three screws which hold the Left and Right Stators together. For model numbers GCA and GCAM these three screws were removed in step 3.
6. Separate the stator frames by tapping on the end of the rotor with a soft mallet. Tap on the Right Stator side first. The rotor will remain attached to the Left Stator.
CAUTION: Do not attempt to pry the left and right stators apart with a screwdriver or wedge.
7. Remove the Coil and the Coil Gaskets from the stators

8. Remove the rotor from the Left Stator by tapping on the rotor shaft with a soft mallet from the Left Stator side.
9. Remove the Powder Seals from the stators by prying around the inner lip with a screwdriver.
10. Remove the Internal Snap Rings from both stators
11. Press the Bearing out of each stator.
12. Remove the Powder Fill Screw (and washer for GCA, GCAM, GCB and GCBM only) from the Right Stator.

NOTE: Discard all bearings, powder seals, gaskets, and magnetic powder. These parts must be replaced, and are included in the repair kit.

REASSEMBLY

IMPORTANT: Reassembly of the clutch must be performed in a clean, dry area. The clutch components must be cleaned with solvent, and must be dry and totally free of grease and oil. Grease or oil on the clutch parts will cause failure when the unit is rebuilt.

CAUTION: Do not immerse the Coil in solvent

1. Install the Internal Snap Rings in the stators.
2. Press the new Powder Seals into the Left and Right Stators. The Powder Seals will bottom on the Internal Snap Rings.

NOTE: The seal lip must face toward the inside of the clutch.

3. Support the rotor on a bench with the cross-drilled holes facing down. Wrap a 6" x 6" (152mm x 152mm) piece of stiff paper, thin plastic, or shim stock around the rotor shaft, forming a sleeve. This will allow the Powder Seal to slide over the end of the rotor shaft and the External Snap Ring groove.
4. Slide the Left Stator and Powder Seal over the thin sleeve until it bottoms on the rotor. Pull the sleeve off the end of the rotor shaft.

NOTE: The seal lip must face the rotor when installing the stator.

5. Press one bearing onto the end of the rotor shaft until it seats against the internal snap ring of the Left Stator.

NOTE: The seal side of the Bearing must face the inside of the clutch.

6. Install the External Snap Ring on the rotor shaft.
7. Turn this assembly over.
8. Install the left side Coil Gasket.

For Models GCA, GCAM, GCB, and GCBM:

Install the Coil gasket into the slot in the Left Stator. Insure that the Coil Gasket is evenly seated all the way around the stator slot.

For Models GCC, GCCM, GCD, and GCDM:

Install the Coil Gasket into the slot in the coil bobbin. Insure that the Coil Gasket is evenly seated all the way around the bobbin slot.

9. Bend the coil lead wires perpendicular to the coil surface. Feed the lead wires through the holes in the Left Stator frame until the Coil seats against the left stator. Bend the lead wires against the Left Stator to hold the Coil in place for further assembly.
10. Install the Right Side Coil Gasket.

For Models GCA, GCAM, GCB, and GCBM:

Install the Coil Gasket into the slot in the Right Stator. Insure that the Coil Gasket is evenly seated all the way around the stator slot.

For Models GCC, GCCM, GCD, and GCDM:

Install the Coil Gasket into the slot in the coil bobbin. Insure that the Coil Gasket is evenly seated all the way around the bobbin slot.

11. Support the Left Stator assembly (Steps 1-10) on a bench with the cross-drilled holes facing up. Wrap a 6" x 6" (152mm x 152mm) piece of stiff paper, thin plastic, or shim stock around the rotor shaft, forming a sleeve. This will allow the Powder Seal to slide over the end of the rotor shaft and the External Snap Ring groove.
12. Slide the Right Stator and Powder Seal over the thin sleeve until it bottoms on the Left Stator Assembly. Pull the sleeve off the end of the rotor shaft.

NOTE: The Powder Seal lip must face the rotor when installing the Right Stator Assembly.

For Models GCB, GCBM, GCC, GCCM, GCD, GCDM: (for Model Numbers GCA, GCAM proceed to step 14)

13. Install the three stator screws loosely.

14. Press the other Bearing onto the end of the rotor shaft until it seats against the Internal Snap Ring of the Right Stator.

NOTE: The seal side of the Bearing must face the inside of the clutch.

For Models GCB, GCBM, GCC, GCCM, GCD, GCDM: (for GCA, GCAM proceed to step 16)

15. Tighten the stator screws evenly until the Left and Right Stators are clamped together.
16. Apply 2 or 3 drops of Wicking Loctite to the inner and outer race of both Bearings. Wait ten seconds and wipe off the excess Loctite.

For Models GCB, GCBM, GCC, GCCM, GCD, GCDM: (for GCA, GCAM proceed to step 18)

17. Install the other External Snap Ring on the rotor shaft against the Bearing. This step is made easier by supporting the clutch on the opposite end of the rotor shaft.

NOTE: Insure that the right bearing is seated against the Internal Snap Ring before attempting to install the External Snap Ring.

18. Insure that the Left Stator frame side of the clutch is facing up and the cross-drilled shaft side is down. Rotate the assembly such that the coil lead wires are at three and nine o'clock. One of the tapped holes should be facing twelve o'clock.

19. Bend a loop in the stripped end of the lead wires to fit under the slip ring screws.

20. Hold the molded Slip Ring so that the back side is facing the lead wires. Attach the lead wire at nine o'clock to the inner tapped hole (aligned with the through hole and counterbore) with the screw. Attach the other lead wire to the outer tapped hole with the other screw.

NOTE: The wires must be attached so that when the Slip Ring is rotated 90° counterclockwise, the lead wires point in the direction of rotation. This will prevent bulging and kinking when the slip ring is attached to the stator housing.

21. Place the three bushings in the matching counterbores of the Left Stator frame.

22. Rotate the Slip Ring 90° counterclockwise and align with the three bushings. Place the Slip Ring over the bushings and make sure that the lead wires are not pinched.

23. Insert the three screws through the Slip Ring and evenly tighten to 20 lb-in.

NOTE: On Model GCA, these screws also hold the stator frames together.

NOTE: For Models GCA, GCAM only

24. Install the other External Snap Ring on the rotor shaft against the Bearing. This step is made easier by supporting the clutch on the opposite end of the rotor shaft.

25. Manually rotate the rotor shaft to insure smooth operation of the rotating parts.

26. Place the clutch on a clean piece of paper. Support the clutch at 45° so that the cross-drilled holes are facing up. Fill the clutch with all of the Magnetic Powder supplied in the repair kit. While filling, slowly rotate the rotor to evenly distribute the Magnetic Powder.

NOTE: Collect any Magnetic Powder spilled on the clean paper and pour it into the clutch.

27. Install the Powder Fill Screw (and washer for GCA, GCAM, GCB & GCBM only) into the Right Stator.

28. Install the collar and set screws on the rotor shaft.

29. Hold the complete clutch assembly at a 45° angle and rotate the rotor to distribute the Magnetic Powder.



MAXCESS INTERNATIONAL COMPANIES



GUIDING • INSPECTION



TENSION CONTROL



SLITTING • WINDING

INSTRUCTION MANUAL GLOBAL SERIES BRAKE

MODELS: GBA, GBAM, GBB, GBBM, GBC, GBCM, GBD, GBDM, GBE, GBEM, GBF, GBFM

CAUTION: This product contains rotating parts which could cause injury at time of installation. Appropriate protective guards should be installed by the user according to his use of this product.

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Periodically there will be updates to this manual. The latest version is available at www.magpowr.com or by calling 1-800-MAGPOWR (624-7697).

THEORY OF OPERATION

The brake construction consists of two stators, a rotor, a coil assembly, magnetic powder, and two bearings. The bearings support and align the rotor with the stators, and allow the rotor to rotate within the brake assembly. The magnetic powder occupies the space between the stators and the rotor, and represents a key element in the operation of the brake.

The stators are connected to the machine frame through a torque arm and remain stationary. The rotor is connected to a rotating machine shaft, which supports the weight of the brake. The magnetic powder functions as the adjustable bond or link between the stators and the rotor. It is the medium for the transmission of torque.

An electric current in the coil creates a magnetic field (flux), which passes through the stators, magnetic powder, and the rotor. The flux aligns the powder particles, forming a bond or link between the stators and the rotor. The strength of the bonding action (torque) is proportional to the amount of current in the coil. The torque is transmitted to the rotating shaft through the rotor.

MECHANICAL INSTALLATION

1. The rotor shaft centerline must be mounted within 30° of the horizontal plane.
2. Prior to installation, manually check the rotation of the rotor to observe that it is smooth and free of binding or scraping.
3. Mount the brake on the shaft and tighten the two set screws.
4. Attach a torque arm between the extension bolt and the machine frame with a "loose" or "floating" mount to prevent binding forces on the brake bearings. The torque arm will prevent the rotation of the brake stators. Protective guards should be installed by the user according to his use of this product.

ELECTRICAL INSTALLATION

For both 24vdc and 90vdc devices:

1. Connect vdc power source to the terminals marked 1, 2.
2. Connect protective grounding circuit* to the terminal marked with the P.E. symbol .

***NOTE:** Both the functional-earth and protective-earth connections to ground are mandatory. The protective-earth ground connection is required for safety and regulatory compliance. The functional-earth ground connection is required for noise immunity, reliability, and Electromagnetic Compliance (EMC) with the European Union (EU) EMC directive for CE-mark conformance.

RATED COIL CURRENTS

NOTE: The coil system has been changed from Class A to Class F. Refer to the nameplate on your unit to determine which insulation class you have. If you have Class F insulation, the nameplate will denote Class F. If you have Class A, there will be no notation on the nameplate.

	Maximum Current @ 0°C, adc			
	Supply Voltage, vdc			
	0 - 24		0 - 90	
Model	Class A	Class F	Class A	Class F
GBA, GBAM	0.94	1.32	0.25	0.28
GBB, GBBM	1.06	1.75	0.28	0.37
GBC, GBCM	1.56	2.06	0.42	0.55
GBD, GBDM	2.03	2.68	0.54	0.69
GBE, GBEM	---	2.76	---	0.80
GBF, GBFM	---	2.98	---	0.93

	Rated Current, adc	
	Supply Voltage, vdc	
	0 - 24	0 - 90
Model	Class F	Class F
GBA, GBAM	0.76	0.16
GBB, GBBM	1.00	0.21
GBC, GBCM	1.18	0.32
GBD, GBDM	1.54	0.39
GBE, GBEM	1.58	0.46
GBF, GBFM	1.61	0.53

ENVIRONMENTAL SPECIFICATIONS

Temperature Range:

Operating 0°C to 40°C
Storage -30°C to +80°C

Relative Humidity: 5% to 85%

Pollution Degree: 2 (IEC664-1)

Altitude: 0 to 2000 meters

MAINTENANCE

Due to its small number of moving components and its basic design, maintenance of the brake is generally necessary only after extended service. When a problem appears in the system, ensure that all couplings, belts, etc., and the control device are functioning properly. Use the Troubleshooting guide below to determine the cause of the problem. For general maintenance, the brakes can be rebuilt with a repair kit. A repair kit includes a new powder charge and the appropriate bearings, seals and snap rings generally needed to rebuild the unit.

NOTE: When ordering parts not contained in the kit, provide the model number, serial number and parts list item number and description from Figure 1.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	ACTION
Load is not controlled by brake	Power supply voltage output low	Replace or repair control
	Magnetic powder has deteriorated	Overhaul the brake
	Coil is open	Replace coil
Load operates in an intermittent manner with proper voltage	Coil is intermittently open	Replace coil
Brake is noisy and has vibration	Bearings are worn	Overhaul brake using repair kit

DISASSEMBLY (Refer to Figure 1)

1. Remove the set screws and collar from the rotor shaft.
2. Remove the external snap rings from both sides of the rotor shaft.
3. Remove the three (four) screws which hold the left and right stators together.
4. Separate the stator frames by tapping on the end of the rotor with a soft mallet (all models except GBE/GBEM and GBF/GBFM). Tap on the right stator side first. The rotor will remain attached to the left stator. For the GBE/GBEM/GBF/GBFM insert the 4 bolts removed in step 3 into the tapped holes in the left stator frame and screw them in evenly to separate the stator halves.

NOTE: Removal of the junction box and cover are not required.

CAUTION: Do not attempt to pry the left and right stators apart with a screwdriver or wedge.

5. Remove the coil and the coil gaskets from the stators.
6. Remove the rotor from the left stator by tapping on the rotor shaft with a soft mallet from the left stator side.
7. Remove the powder seals from the stators by prying around the inner lip with a screwdriver.
8. Remove the internal snap rings from both stators.
9. Press the bearing out of each stator.
10. Remove the powder fill screw (and washer for GBA, GBAM, GBB & GBBM only) from the right stator. For all other models remove the blind rivet.

NOTE: Discard all bearings, powder seals, gaskets, snap rings and magnetic powder. These parts must be replaced, and are included in the repair kit.

RE-ASSEMBLY

IMPORTANT: Re-assembly of the brake must be performed in a clean, dry area. The brake components must be cleaned with solvent, and must be dry and totally free of grease and oil. Grease or oil on brake parts will cause failure when the unit is rebuilt.

CAUTION: Do not immerse the coil in solvent.

1. Install the internal snap rings in the stators.
2. Press the new powder seals into the left and right stators. The powder seals will bottom on the internal snap rings.

NOTE: The seal lip must face toward the inside of the brake.

3. Support the rotor on a bench with the cross-drilled holes facing down. Wrap a 6" x 6" (152 mm x 152 mm) piece of stiff paper, thin plastic, or shim stock around the rotor shaft forming a sleeve. This will allow the powder seal to slide over the end of the rotor shaft and the external snap ring groove.
4. Slide the left stator and powder seal over the thin sleeve until it bottoms on the rotor. Pull the sleeve off the end of the rotor shaft.
5. Press one bearing onto the end of the rotor shaft until it seats against the internal snap ring of the left stator.

NOTE: The seal side of the bearing must face the inside of the brake.

6. Apply 2 or 3 drops of wicking Loctite to the inner and outer race of both bearings. Wait ten seconds and wipe off the excess Loctite.
7. Install the external snap ring on the rotor shaft.
8. Turn this assembly over.
9. Install the left side coil gasket.

NOTE: For Models GBA, GBAM, GBB AND GBBM: Install the coil gasket into the slot in the left stator. Insure that the coil gasket is evenly seated all the way around the stator slot.

NOTE: For Models GBC/GBCM, GBD/GBDM, GBE/GBEM and GBF/GBFM: Install the coil gasket into the slot in the coil bobbin. Insure that the coil gasket is evenly seated all the way around the bobbin slot. Use a few drops of instant adhesive to keep gasket from moving during assembly.

10. Place the coil into the left stator with the leads exiting through the slot into the junction box.
11. Install the right side coil gasket.

NOTE: For Models GBA, GBAM, GBB AND GBBM: Install the coil gasket into the slot in the right stator. Insure that the gasket is evenly seated all the way around the stator slot.

NOTE: For Models GBC/GBCM, GBD/GBDM, GBE/GBEM, and GBF/GBFM: Install the coil gasket into the slot in the coil bobbin. Insure that the coil gasket is seated evenly all the way around the bobbin slot. Use a few drops of instant adhesive to keep gasket from moving during assembly.

12. Support the left stator assembly on a bench with the cross-drilled holes facing up. Wrap a 6" x 6" (152 mm x 152 mm) piece of stiff paper, thin plastic, or shim stock around the rotor shaft, forming a sleeve. This will allow the powder seal to slide over the end of the rotor shaft and the external snap ring groove. Slide the right stator and powder seal over the thin sleeve until it bottoms on the left stator assembly. Pull the sleeve off the end of the rotor shaft.
13. Install the three (four) stator screws, split lockwashers, and nuts loosely.

NOTE: The long stator screw should be installed 180° from the junction box.

14. Press the other bearing onto the end of the rotor shaft until it seats against the internal snap ring of the right stator.

NOTE: The seal side of the bearing must face the inside of the brake.

15. Tighten the stator screws evenly until the left and right stators are clamped together.
16. Apply 2 or 3 drops of wicking Loctite to the inner and outer race of both bearings. Wait ten seconds and wipe off the excess Loctite.
17. Install the other external snap ring on the rotor shaft against the bearing. This step is made easier by supporting the brake on the opposite end of the rotor shaft.

NOTE: Insure that the right bearing is seated against the internal snap ring before attempting to install the external snap ring.

18. Manually rotate the rotor shaft to insure smooth operation of the rotating parts.
19. Place the brake on a clean piece of paper. Support the brake at 45° so that the cross-drilled holes are facing up. Fill the brake with all of the magnetic powder supplied in the repair kit. While filling, slowly rotate the rotor to evenly distribute the magnetic powder.

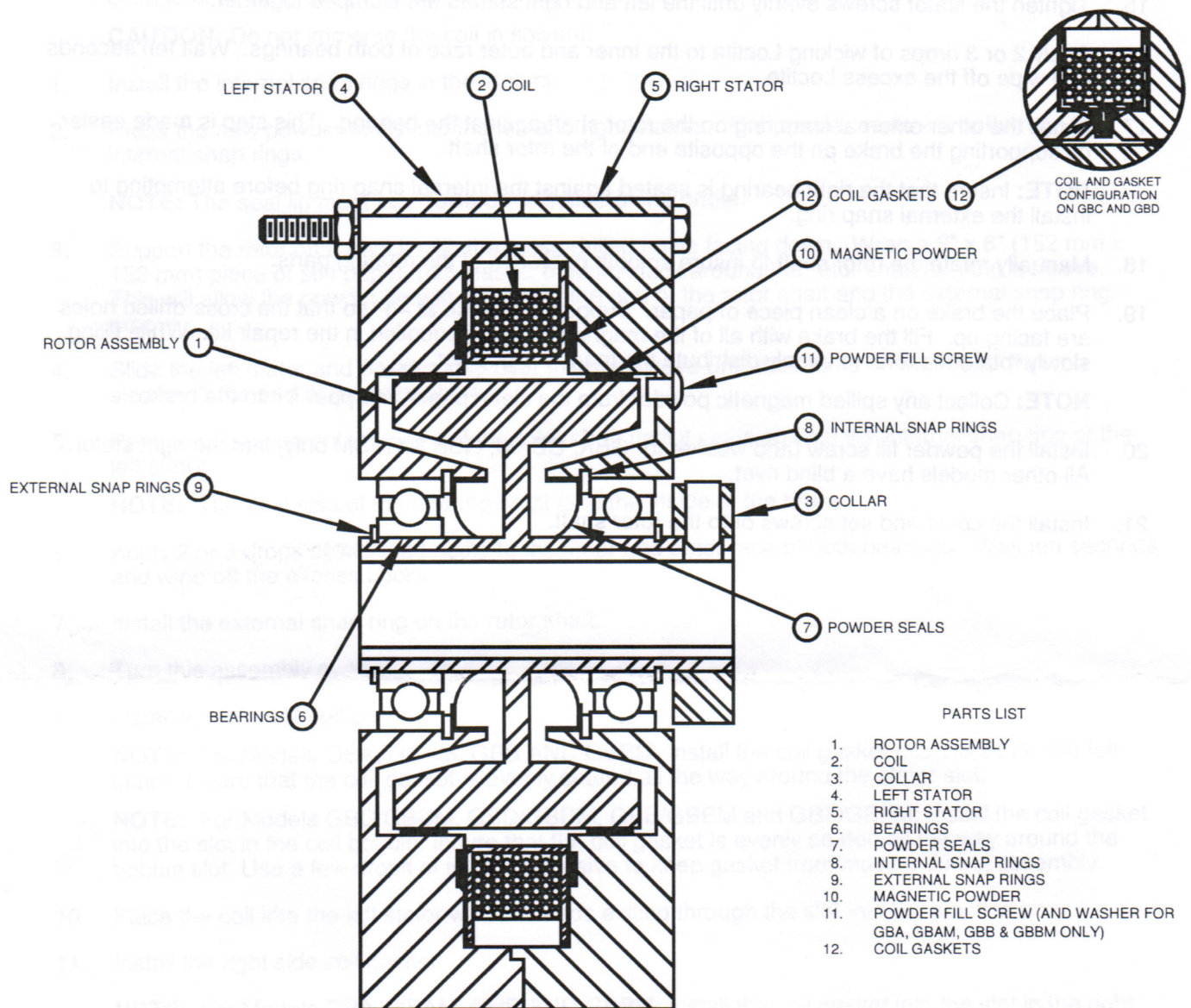
NOTE: Collect any spilled magnetic powder from the clean paper and pour it into the brake.

20. Install the powder fill screw (and washer for GBA, GBAM, GBB & GBBM only) into the right stator. All other models have a blind rivet.
21. Install the collar and set screws onto the rotor shaft.



1. The rotor shaft should be checked to insure it is smooth and free of bending or warping.
2. Prior to installation, the user should check the rotor shaft to insure that it is smooth and free of bending or warping.
3. Mount the brake on the shaft and tighten the two set screws.
4. Attach a torque arm to the rotor shaft and the machine body with a "torque" or "torque" nut. The torque arm will prevent the rotation of the brake stators. Proper torque should be applied by the user according to the use of this product.

FIGURE 1. BRAKE CROSS SECTIONAL VIEW



MAXCESS INTERNATIONAL COMPANIES



GUIDING • INSPECTION



TENSION CONTROL



SLITTING • WINDING

PowerBlock2

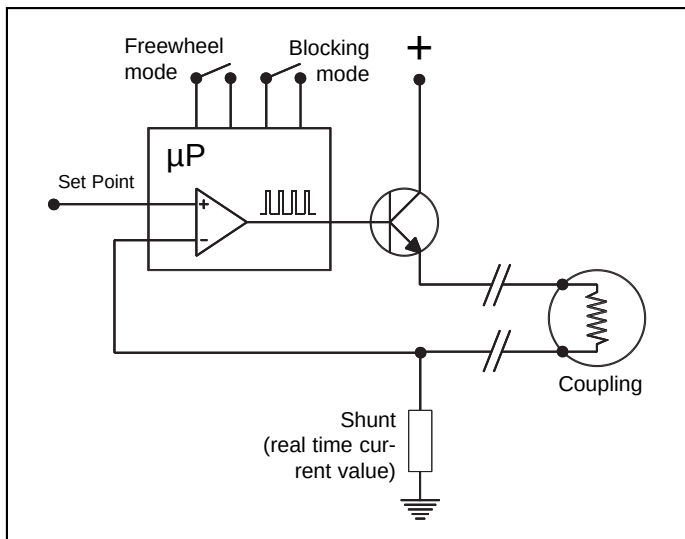
ME127441-00



Technical features:

Input voltage	[V]	24 AC / DC
Max output current	[A]	2
Output load (resistance)	[ohm]	4 à 20
Max power consumption	[VA]	70
Remote voltage control	[V]	0 à 10 DC
Ambient temperature	[° C]	+10 ... +40
Weight	g	170

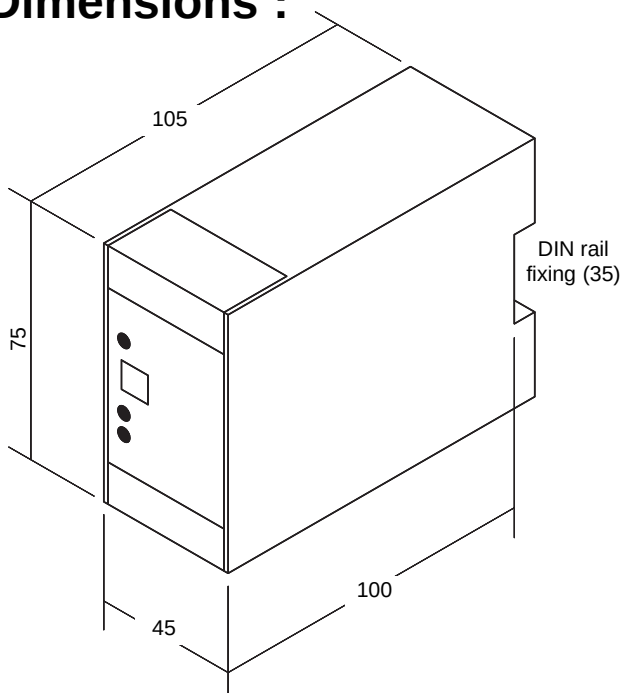
Schematic diagram :



Benefits :

- Regulated current power supply based on microcontroller technology:
 - ➔ Accurate current output control
 - ➔ High level of protection against transients (short-circuit & circuit opening)
 - ➔ Working modes easy management
- Remote control via potentiometer or analog voltage 0 to 10 V
- Freewheel and Blocking modes managed from external contacts or analog voltages
- Selected mode status shown by front face Leds
- Real time Current equivalent voltage output available
- Plug-in connectors
- Compact enclosure with integrated DIN rail fixing system
- CE - CEM compatible

Dimensions :



Electrical wirings :

Connections

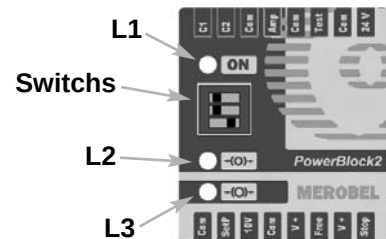
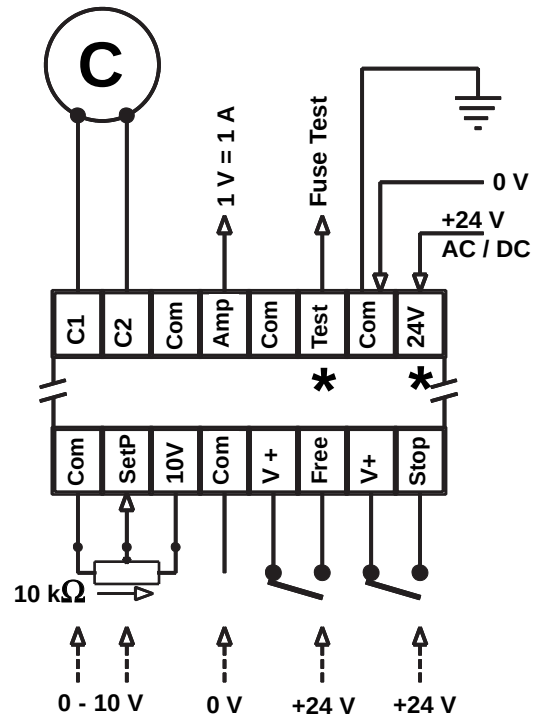
C1 / C2	Coupling supply (C)
Com	0 V
Amp	Real time current equivalent voltage (1.00 A → 1.00 V)
Test	Internal fuse test points (when OFF, measure of 10 k Ω between the two 2 points (*) means that the fuse is OK)
0 V	Equipotential supply point (when earthing the transformer secondary)
24 V	Supply : 24 V AC ou 24 V DC
SetP	Set point input (0 → 10 V DC)
10V	Set point potentiometer supply (10 k Ω)
V+	Logic inputs voltage remote control
Free	Logic input "Freewheel" mode
Stop	Logic input "Blocking" mode

Front face Leds

L1	Power ON
L2	Freewheel mode active
L3	Blocking mode active

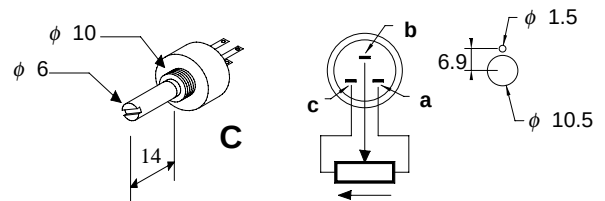
Switches

S1 S2 S3	Max current level adjustment (from 0.25 to 2.00 A, for set point input = 10 V)
----------	---



Options :

Accessories	Reference
Potentiometer 10K	ME323054-01



Note :

- The equipotential point is available on terminal "Com" of the supply terminals
- When earthing the secondary of the transformer, please use the opposite sketch

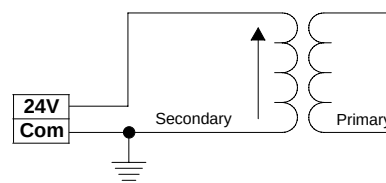


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4-8 Temperature Setting	
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6) Maintenance	
7) Circuit Diagram	
8) UV Lamp Specifications	
9) Model / Serial Nos.	

1. **Summary**

- 1) This system is a UV curing unit, designed to work on label printing presses, and flexo-printing presses.
- 2) The system runs 6 UV lamps, with maximum curing width of 300mm.
- 3) The system runs on temperature control, allowing for high-precision operation while lowering heat emission levels.

2. **System Configuration**

This system comprises 3 main components

- 1) The electrical cabinet, housing the power supply units for the 6 UV lamps and the corresponding exhaust fan coil.
- 2) UV lamp boxes; 6 boxes each equipped with pneumatic shutter doors and IR filters.
- 3) UV lamps : 5 X 3.6KW Hg UV lamps; Model No. H36/300C
1 X 4.8KW Hg UV lamp; Model No. H48/300C

3. **System Specifications**

3-1 Control System

UV System Model No.

Electrical Cabinet : Model No.

Power Voltage : 380V +/-5%

Phase : 3 Phases

Frequency : 50Hz

Power Input : 380V / 45A

Cabinet Dimension : L1,800 X D600 X H1,600mm

Power Cable : 3C X 16mm² + 1C X 10mm²

3-2 UV Lamp Boxes

UV Lamp H36/300C	Curing width	300mm
	Power	Max.3,600W; 120W/cm
	Voltage	AC480V +/-20V
	Current	Max. 7.5A
UV Lamp H48/300C	Curing width	300mm
	Power	Max.4,800W; 160W/cm
	Voltage	AC580V +/-20V
	Current	Max. 8.3A
General Features	Cooling Mode	Forced cooling
	Stabilize Time	Max. 1.5 minutes
	Re-start Lapse Time	Max. 3 minutes
	Approx Lamp Life	800 Hours

3-3 Exhaust Fan Coil

For 3.6KW Lamps	Fan Coil Model
	Power Supply 1/2 horse power; 3 Phase 380V
	Speed 2,800RPM
	Diameter Intake 4"; Outlet 6"
	Air Volume & Pressure 7m ³ / min; 110mm
For 4.8 KW Lamps	Fan Coil Model
	Power Supply 400W; 3 Phase 380V
	Speed 2,800RPM
	Diameter Intake 4"; Outlet 6"
	Air Volume & Pressure 6m ³ / min; 160mm
Common Fan Coil	Fan Coil Model
	Power Supply 2 horse power; 3 Phase 380V
	Speed 2,800RPM
	Diameter Intake 4"; Outlet 10"
	Air Volume & Pressure 68.5m ³ / min; 85mm

4. Installation and Operation

4.1 Preparations

(1) The electrical cabinet

- The cabinet stands on wheels and can be moved around easily on smooth and level floor area. Lifting the cabinet must be handled by hoist or forklift, with support to the under-side of the cabinet. Always avoid tilting the cabinet to one side.
- The cabinet has to be install in-door, with ambient temperature of 0-40℃; humidity 30-90%. Always avoid accumulation of dust and dirt around the cabinet.
- Make sure the power cable is secured tightly to the connectors, and be connected to ground.
- Power supply of the system is 3 Phase, 380V/50Hz; deviation from this will affect proper functioning of the system.

(2) Lamp Boxes

- Lamp Boxes are to be handled with care due to fragile items such as UV lamp and quartz filters inside.
- Adjust the level of the lamp boxes to ensure smooth feeding of printing substrate.
- Make sure UV rays is not escaping from the lamp boxes in large amount.

Adjust the upper and lower lamp shade plates to lessen the amount of UV rays escaping from the lamp box.

(3) UV Lamps

- a. Use only UV lamps supplied by our company. Non-compatible lamps will give rise to problems such as unstable running and over-heating of system, as well as shortened life-time of the lamps.
- b. The UV lamps should be handled on both end, and avoid touching the quartz lamp tube by hands. If touched by hand, wipe clean with alcohol, and then wipe dry with clean cloth.

(4) Exhaust Outlet

Make sure the exhaust outlet is big enough and free of any obstacle, allowing for free emission of hot air outdoor.

(5) Exhaust Pipes

- a. All exhaust pipes---whether connecting the lamp boxes to the fans, or from the fans to the outlet---must take the shortest routing and in straight alignment as possible. Air flow is hampered by too long a routing and too many turns in the exhaust path.
- b. Follow the instructions when connecting the exhaust fan coil with the pipes.

4.2 Installation

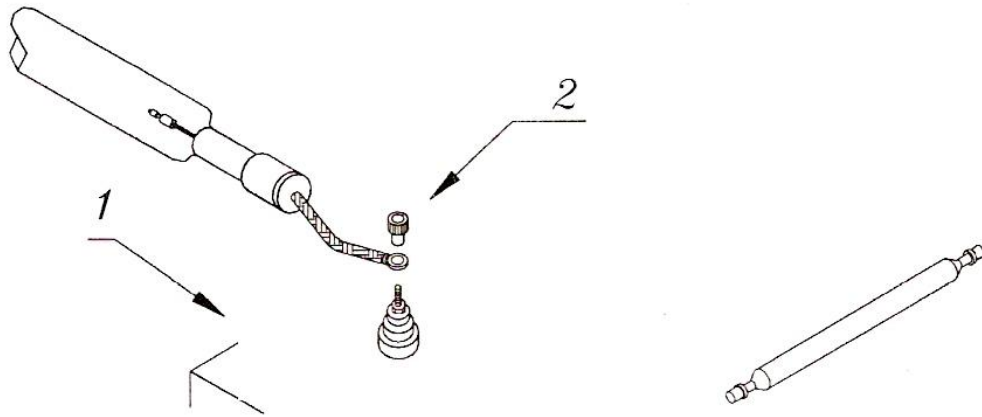
(1) Make sure of sufficient power supply to system 380V / 45A.

The electrical cabinet is to be stationed in a relatively cool, dry and clean area, no further than 2.5M away from the lamps.

(2) Installing the UV Lamps

Remove the quartz filters from the lamp box; open the shutter doors to install the UV lamp.

- a. Avoid touching the quartz lamp tubes with the hands.
- b. Handle the UV lamp by holding the ceramic heads on both ends. Insert the ceramic heads in the spring lamp holders.
- c. Unscrew the cap from the insulation post; place the lamp connector on the insulation post; screw on the cap again, and make sure the connector is secured on the post. (As shown in diagram)



- d. After the lamp has been secured in the lamp box, replace other Parts; secure the entire lamp box on the printing machine, adjust for horizontal leveling of the lamp box.
- e. Connect the exhaust pipes to the lamp box.

(3) Electrical Connections

- a. Mains supply cable : UV power supply control box → mains distribution connector.

Connect mains supply cable, 3C X 16mm² + 1C X 10mm² to 3 Phase power supply. Connect to ground the 10mm² cable.

Check for phase-sequence alarm, which indicates wrong sequence connection. Reconnect power supply cable for right sequence if alarm goes on.

- b. Output cable : Power supply control box → UV lamp boxes.

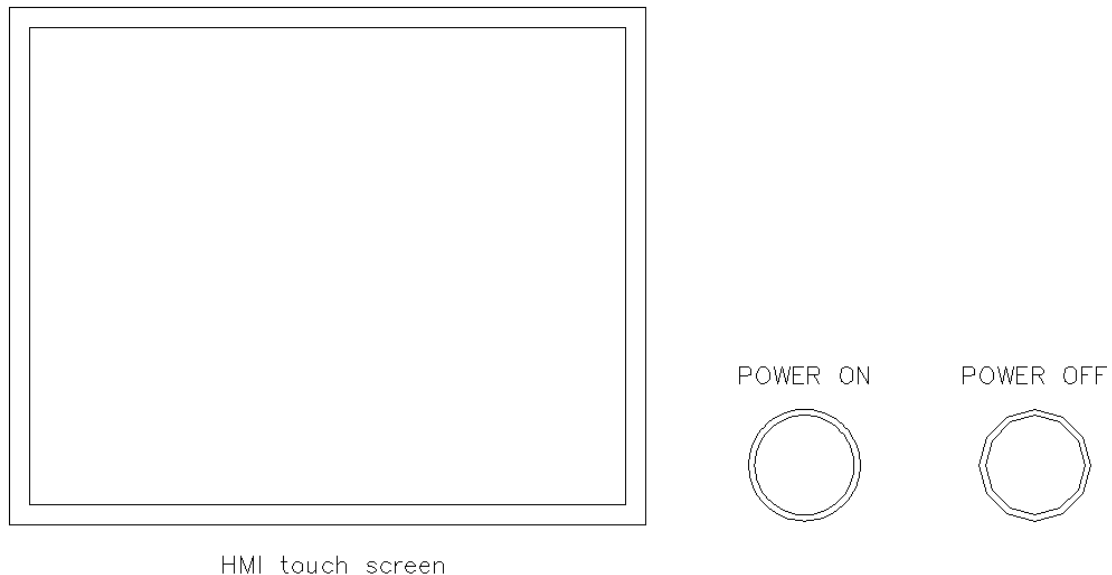
Connect to the lamp boxes as per numbers indicated.

- c. Exhaust fan cable : Power supply control box → exhaust fan coil.

Connect to the exhaust fan coils as per numbers indicated.

- d. Tandem cable : Power supply control box → printing machine.

4.3 Control Panel Switches and Indicator Lights



4.4 Pre-run Check-list

- a. Make sure power supply voltage and frequency match with those as required by the system.
- b. Make sure all electric cable connections are well secured.
Loosen or faulty connections may result in short circuits and damage of components.
- c. Make sure all six UV lamps are properly installed.
- d. Make sure the exhaust pipes are properly installed.
- e. Make sure the exhaust fan is running in the correct direction.
If reversed, the fan motor may have been connected in the wrong phase sequence, and re-connection in the right sequence is necessary.

4.5 Machine Operation

- a. Turn on the Main Power Switch on the electrical cabinet.
- b. Push the Power Control Button to switch power on.
- c. On the touch screen, push “English” to open the Control Page;
then switch on the required UV lamp or lamps, one by one.
- d. Wait for the lamps to reach the pre-set temperature, then push “Auto” and system will run.

4.6 Machine Turn Off

- a. Switch off the lights one by one.
- b. Push the Power Control Button to switch power off.
- c. Wait till the exhaust fan coils have stopped (about 3 minutes), turn off the Main Power Switch on the electrical cabinet.

4.7 Reminders for proper system operation

- a. Always avoid touching the UV lamp quartz tubes by naked hands. If touched by accident, wipe clean with alcohol.
- b. Perform regular checking on lamp connections; make sure all connections are secured.
- c. Replace an old UV lamp with a new one after 800 hours, which is the average work-life of the lamp. Beyond 800 hours, the lamp intensity will decrease quickly, resulting in poor curing of the print products.
- d. The UV lamps run on very high temperature, reaching 800℃ on the surface of the quartz tube. Do not touch the quartz tubes with naked hands --- even after the lamps have been turned off for a while.
- e. Always switch off power supply when replacing the UV lamps.
- f. Avoid direct contact of the eyes or naked skin with any UV rays that may escape from the lamp boxes. UV rays is hazardous to health.

4.8 Temperature Setting (In □)

- a. “PV” displays the actual measured values; or when at setting mode, displays the function menu.
- b. “SV” displays the set values. At set mode, this displays the setting specifications.
- c. Push “<”
- d. When the “SV” values flash, push the “^” and “v” keys to adjust the setting up and down.
- e. After the settings have been entered, press “SV”, the values stop flashing, and the settings are registered.
- f. Do not press and hold the touch screen for a long time, or poke at the screen, as this would change the setting specifications, resulting in abnormal operation of system.

5. Trouble Shooting

<i>mal-functioning</i>	<i>diagnosis</i>	<i>solutions</i>
a. Alarm goes on; UV lamp not lighting	1. UV lamps not allowed to cool off completely. 2. Problem with the Lamp. 3. System control problem	1. Allow lamps to cool off completely before lighting again Or turn up the exhaust fan to speed up cooling. 2. If lamp still won't light after cooled off completely, check voltage at both ends of lamp inside lamp box. If no voltage, it is problem with system controls; if voltage is registered, it is problem with the UV lamp. 3. Check the fuse; check the electro-magnetic valve.
b. Alarm goes on; exhaust is delayed and over heating displayed	1. Exhaust inside lamp box not function properly	1. Check if exhaust fan is turning in the direction as indicated by the arrow on the fan motor. If direction is reversed, re-connect cable to fan motor for right phase sequence. 2. Check if the exhaust fan is running. If not, check if it is blocked by foreign objects. Also check if the overload relay has jumped. If so, reset the relay. If relay keeps jumping, check if

		the fan motor is running properly. Also check if setting for the overload relay has to be increase, or the relay itself has to be replaced. 3. Check if the exhaust pipe has been damaged or leaking somewhere; clear any object or dirt blocking the lamp box air inlet. 4. Check the air regulator valve and the thermometer, and replace any damaged parts.
	2. Lamp not matching; power output higher than actually required.	1. Check voltage and current of lamp to see if they match with those required for this system. Replace with matching UV lamp.
c. UV rays escape from lamp box	1. Shutter door cannot close completely 2. Shutters cannot operate	1. Check if pneumatic pressure is sufficient, 4.5~6Kg; adjust pressure accordingly. 2. Check if shutter door is deformed. Realign the shutters or replace with new ones. 1. Check lamp box circuit, electro-magnetic valve ADC 24V; check if the pneumatic cylinder or speed regulator damaged.

d. Ink not curing	1. Lamp intensity drops due to aging	1. Reduce printing speed; or replace UV lamp.
	2. Lamp tube, quartz filters and reflectors covered by dirt	1. Cleansing with alcohol. 2. Replace parts that cannot be cleaned thoroughly
	3. UV ink passed shelf-life; or not of right quality	1. Switch to matching ink type; consult your ink supplier.
	4. Ink rollers, printing plates and substrate not matching	1. Switch to matching materials; consult your supplier.

6. Maintenance

Monthly inspection and maintenance of system is recommended. Frequency of inspection and maintenance should be increased depending on work load of system as well as the work environment. Poor maintenance likely results in shortened work life of the UV lamps, components and the system as a whole.

6.1 The electrical cabinet

- a. When the system is working, check to make sure all exhaust fans in the electrical cabinet are running, and that the air filters are not blocked.
- b. Check for any unusual noise, or burnt smell.
- c. Check to ensure that all electrical connections are tightly secure.
- e. Check to ensure all wiring are tightly secure.

6.2 The UV lamp boxes

- a. All air inlets be free of dust and dirt.
- b. Clean any dust or dirt that may have gathered on the lamp tubes, the reflectors and the quartz filters.
- c. Checked that the shutter doors are well-aligned. Realign or replace the shutter door if it has been deformed.
- d. Check that the pneumatic cylinders are functioning properly, and that they are fastened in place.

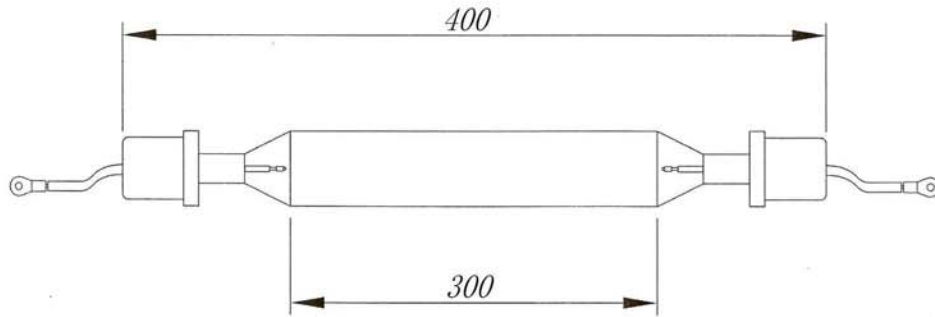
6.3 The exhaust fans

- a. Clean the fan blades regularly.

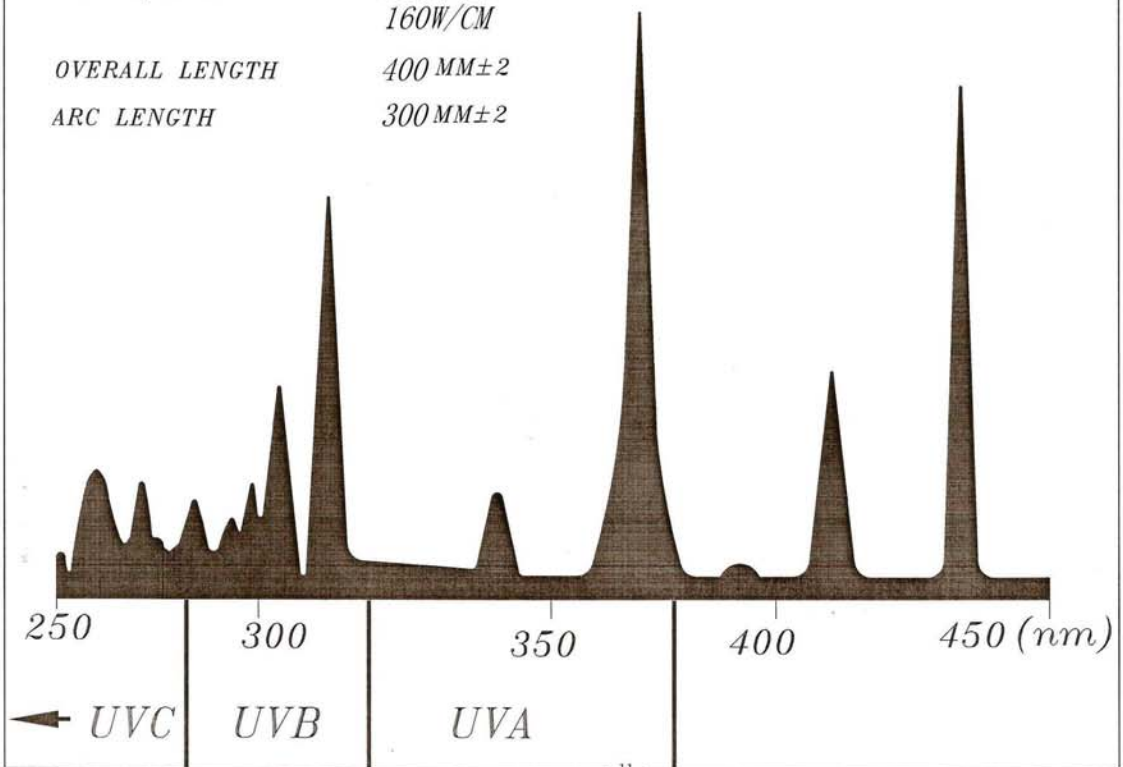
- b. Check for any unusual noise by the fan motor; have the motor bearings oiled regularly.
- c. Check that the exhaust pipes are not damaged, and there is no foreign object inside the pipes.
- d. Check that the air regulating valve is running properly.
- e. Check that the temperature sensors are secured in place.

UV LAMP SPECIFICATION SHEET

UV LAMP MODEL
 UV H36/300C
 UV H48/300C



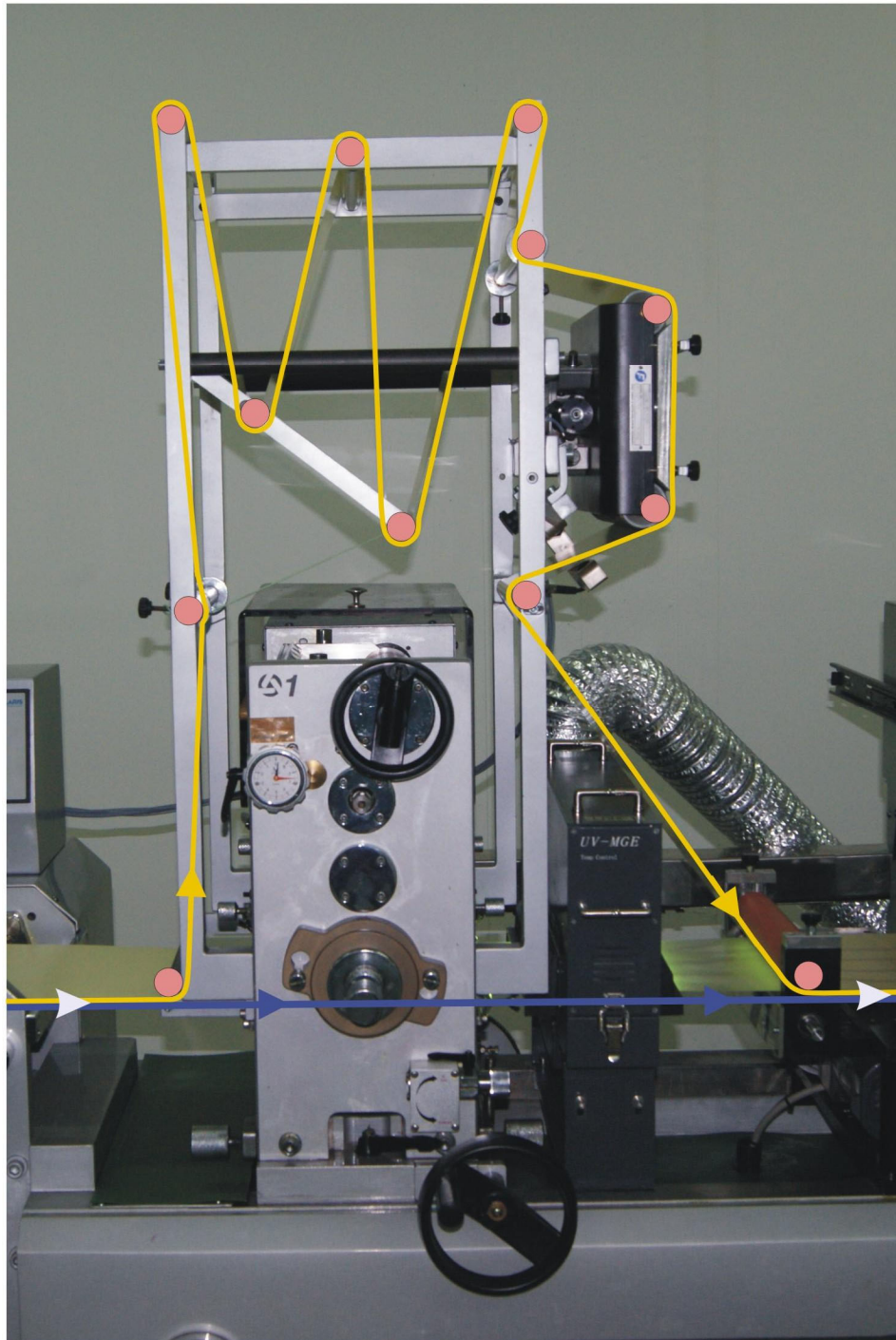
UV LAMP MODEL	UVLIGHT UV H36/300C UV H48/300C
POWER	3600W 4800W
WATTS/INCH	120W/CM 160W/CM
OVERALL LENGTH	400 MM±2
ARC LENGTH	300 MM±2



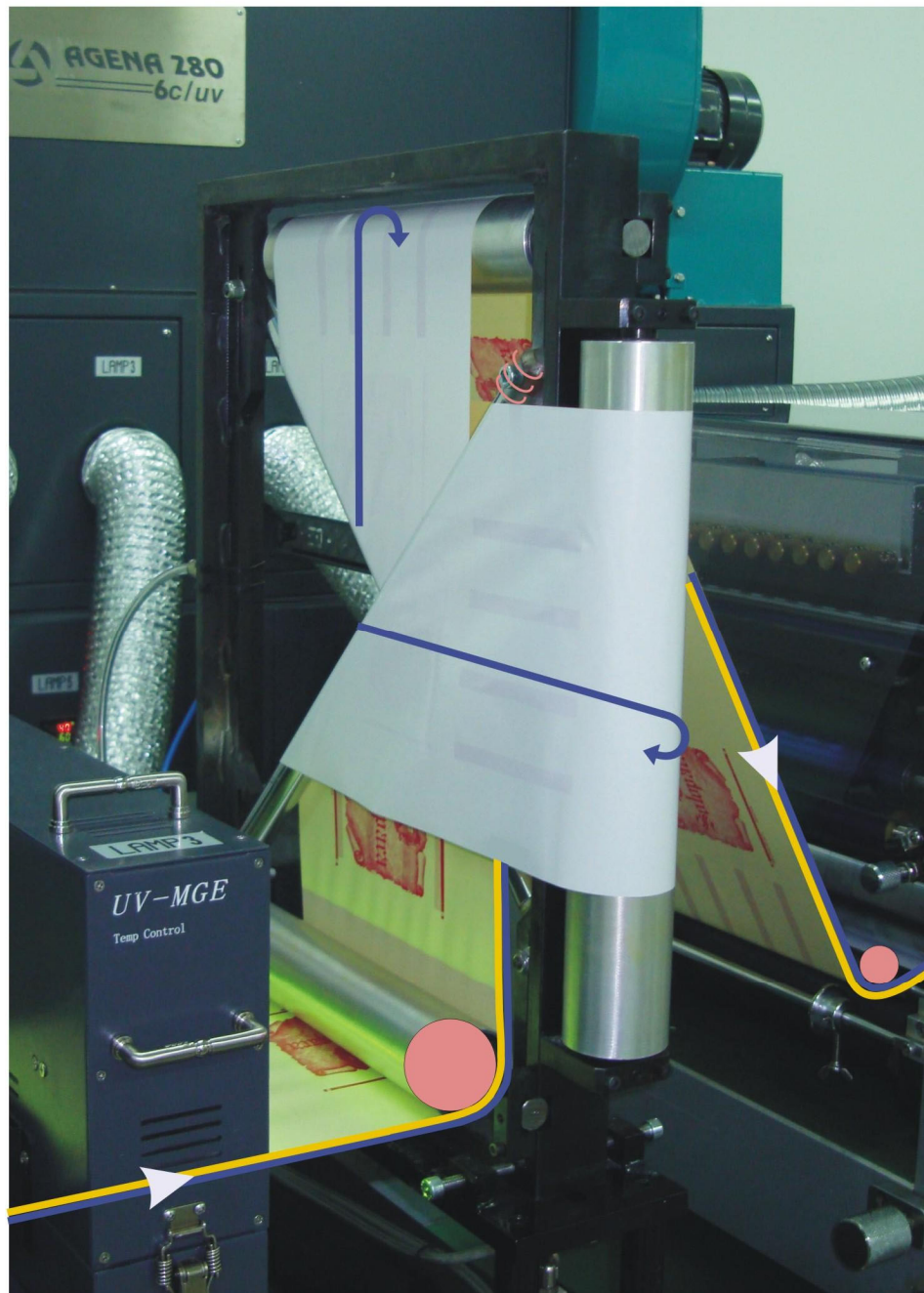
DRAWING OF ENTRY PAPER



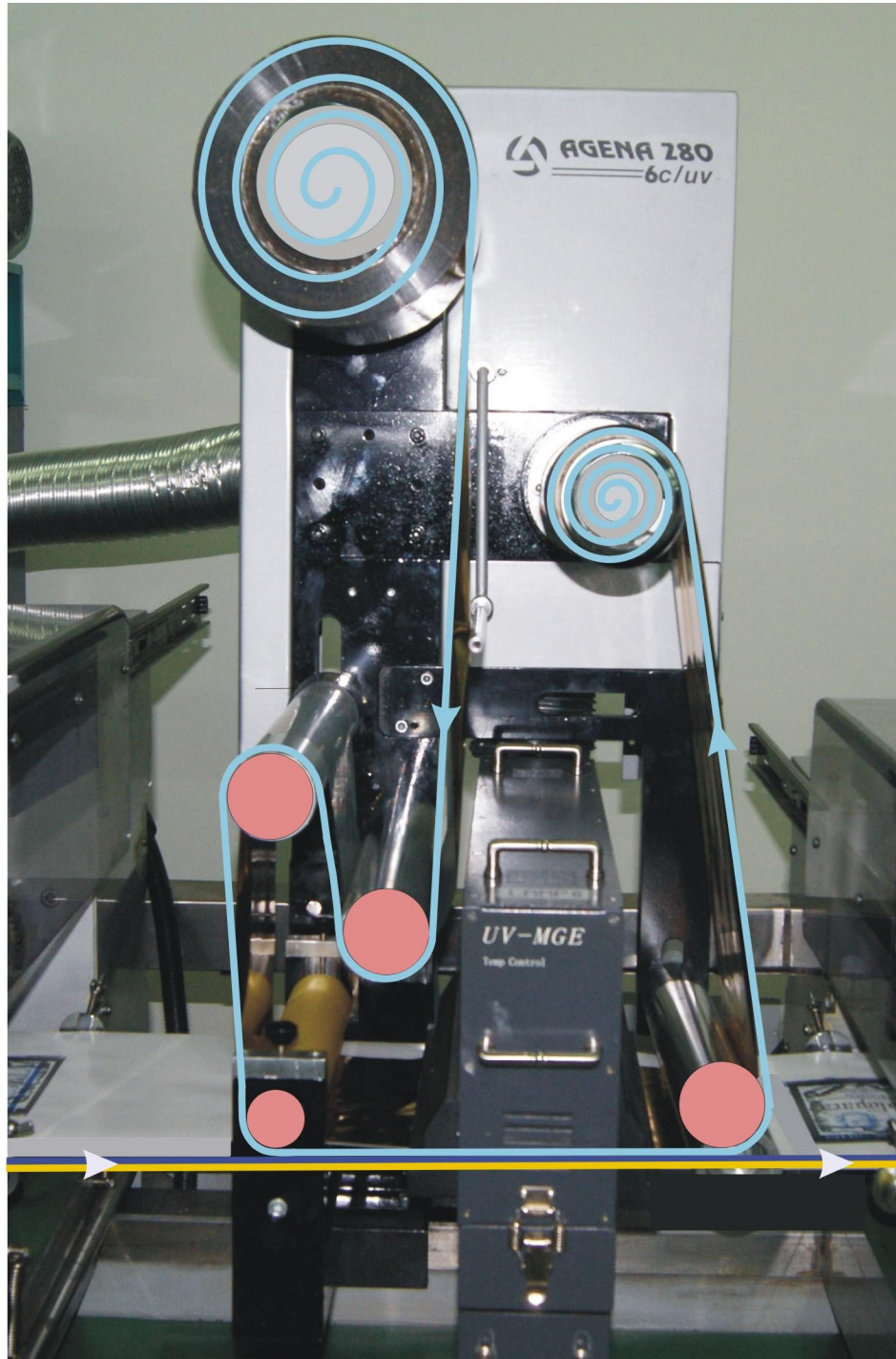
DRAWING OF ENTRY PAPER



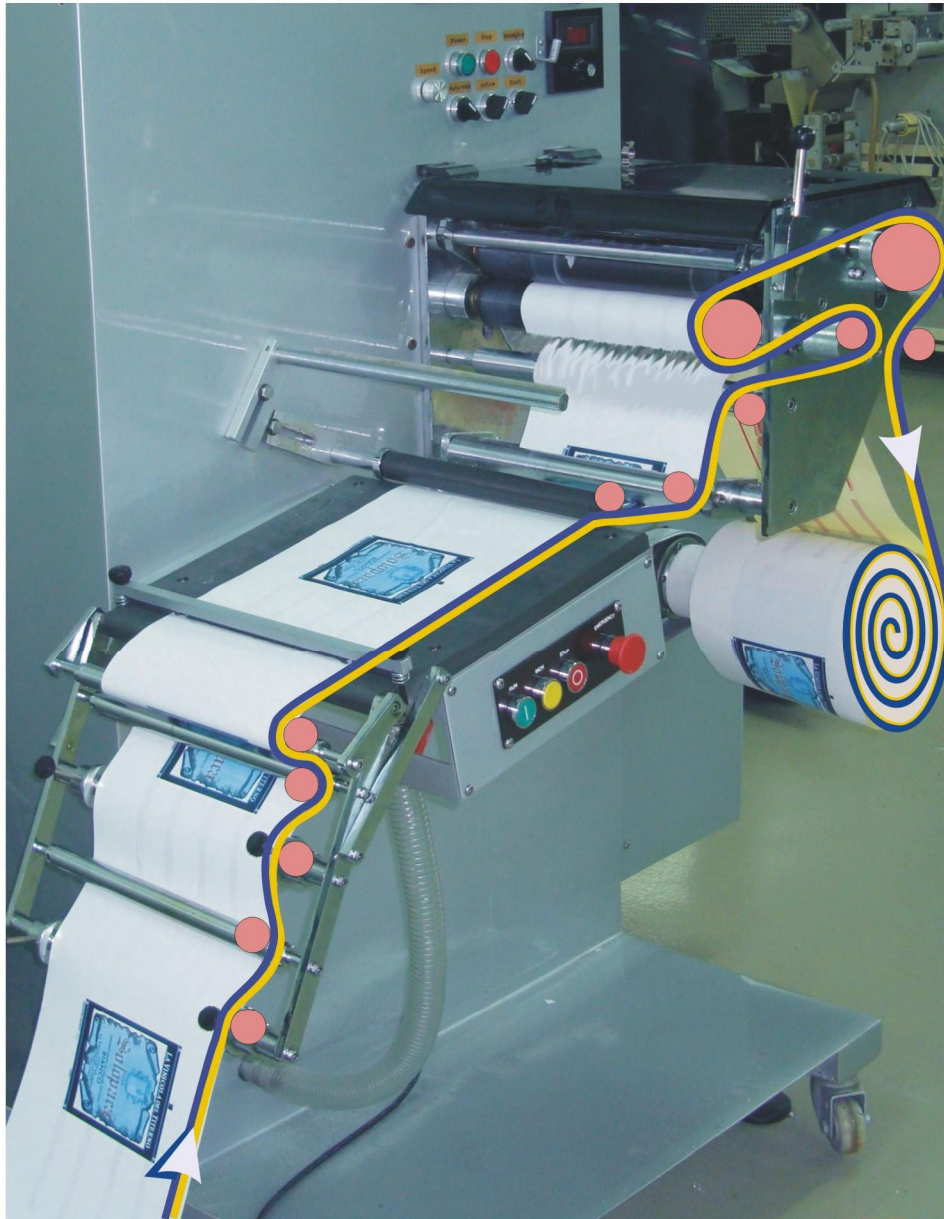
DRAWING OF ENTRY PAPER



DRAWING OF ENTRY PAPER

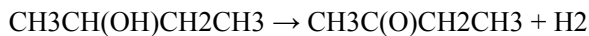


DRAWING OF ENTRY PAPER



Maintenance

1. Please regularly check the working status of the electrocircuit, the indicator lamps, the contactors and other electric components, and make sure all the above are under good working condition.
2. Please check and maintain constantly the parts which are required to maintain by the manufacturer.
3. Please check the lubricating condition of the machine frequently, and add or change the lubricating oil accordingly.
4. Please regularly check the clutch and make it always work well.
5. Please make sure all the electric components are well ventilated and free from damp or moist.
6. The rubber roller supplier says the best solvents to use to clean the rubber rollers should be **butanone** solvents. The supplier also comments that the current solvents use to clean rubber rollers are much more caustic than before. That is why the rubber rollers are more easily damaged. The supplier suggests the best way to use again the rubber rollers is to wait until the rollers are completely dry after cleaning the rollers.

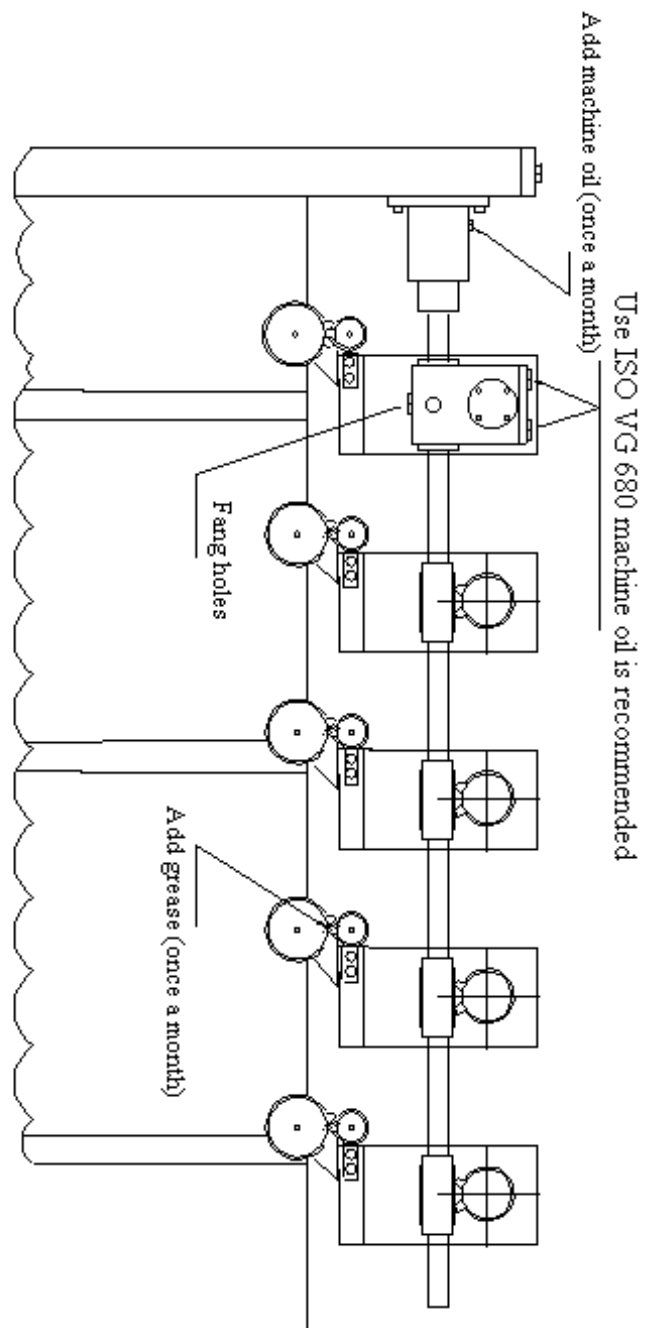


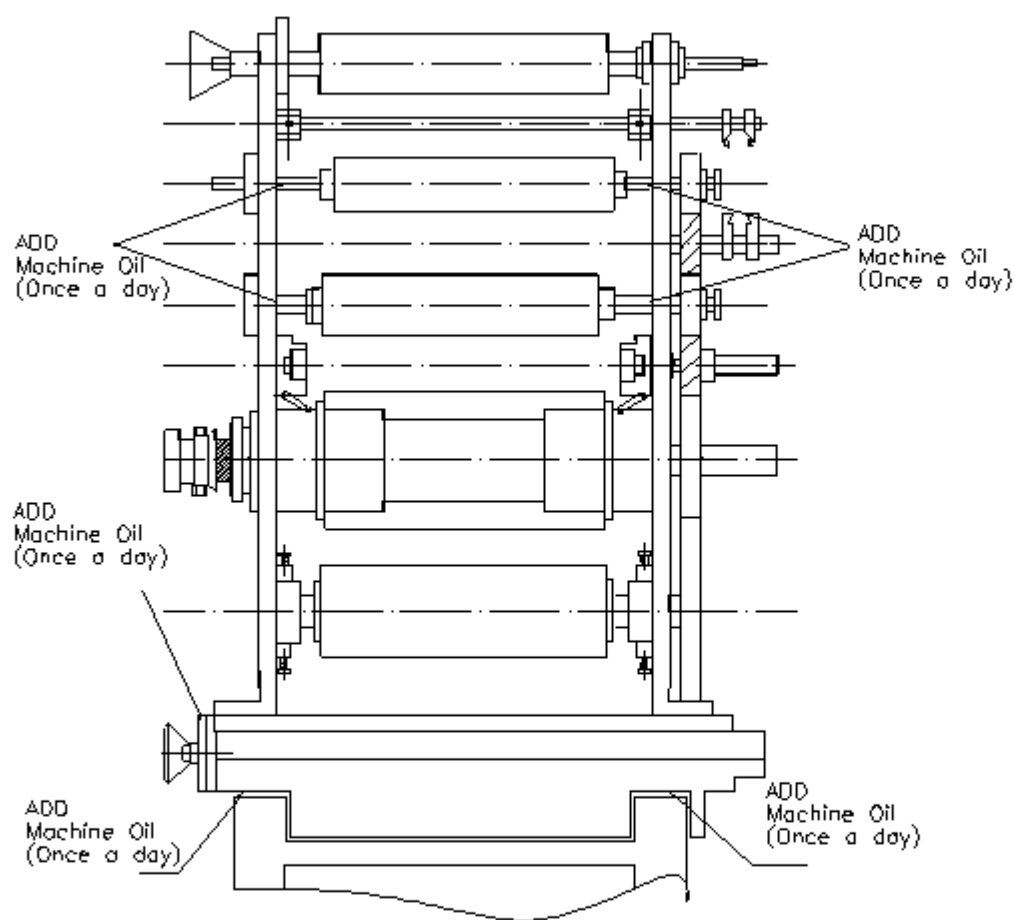
Labelling F; Xi; R: 11-36-66-67; S: (2-)9-16

Power distribution parameters (Intermittent press)

1. “3-phase + 4-line” pattern, plus earth wire
(A: N wire connects with earth wire; B: grounding Both A and B are OK.)
2. Main switch loading current capacity: 150A (shaftless); 100A (with shaft)
3. “3-phase + 4-line” pattern, wire diameter of shaftless machine is 35mm², wire diameter of machine with shaft is 25mm², earth wire 6mm² and N wire 10mm². The wire colors from the main switch are red (A), yellow (B), green (C), black (N wire), yellow/green (earth wire, PE).
4. The main switch is installed on the left-hand side forward, with 1.6M high away from the ground.
5. The loading current of each UV dryer is around 7A.

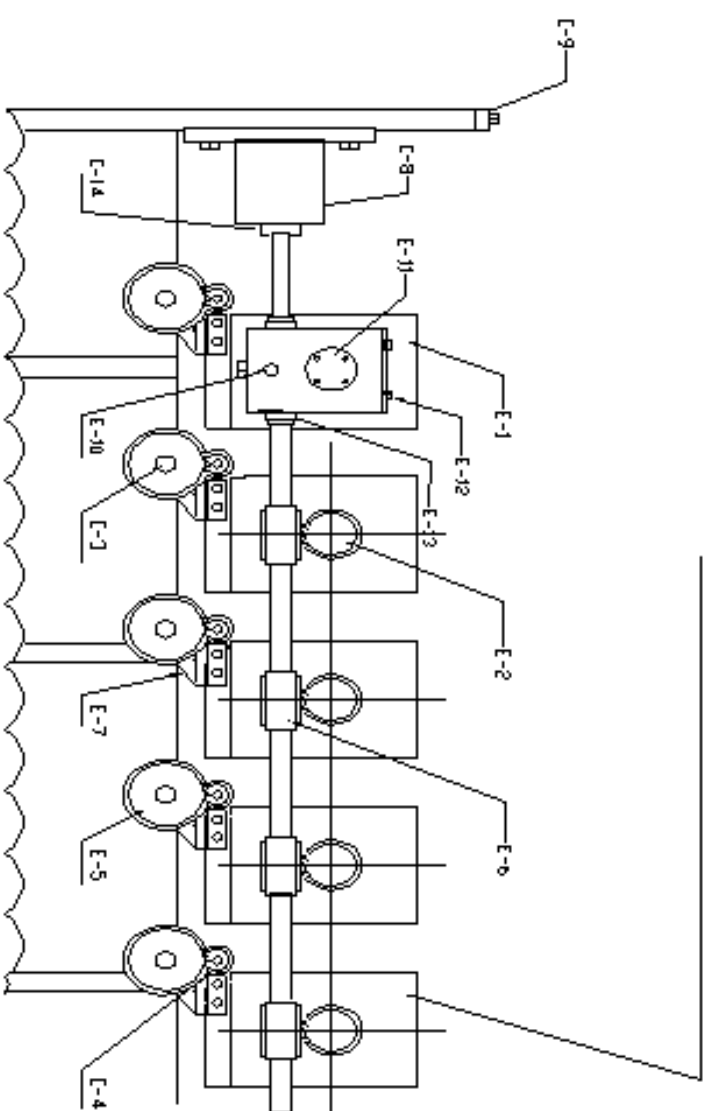
Relevant mechanical drawing

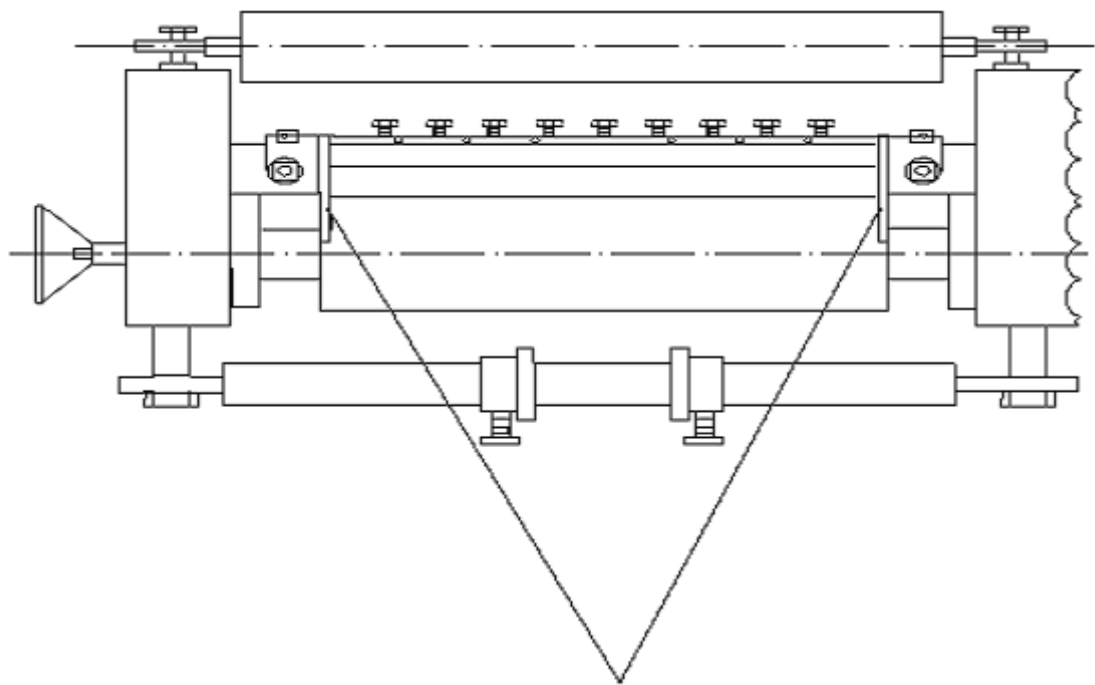




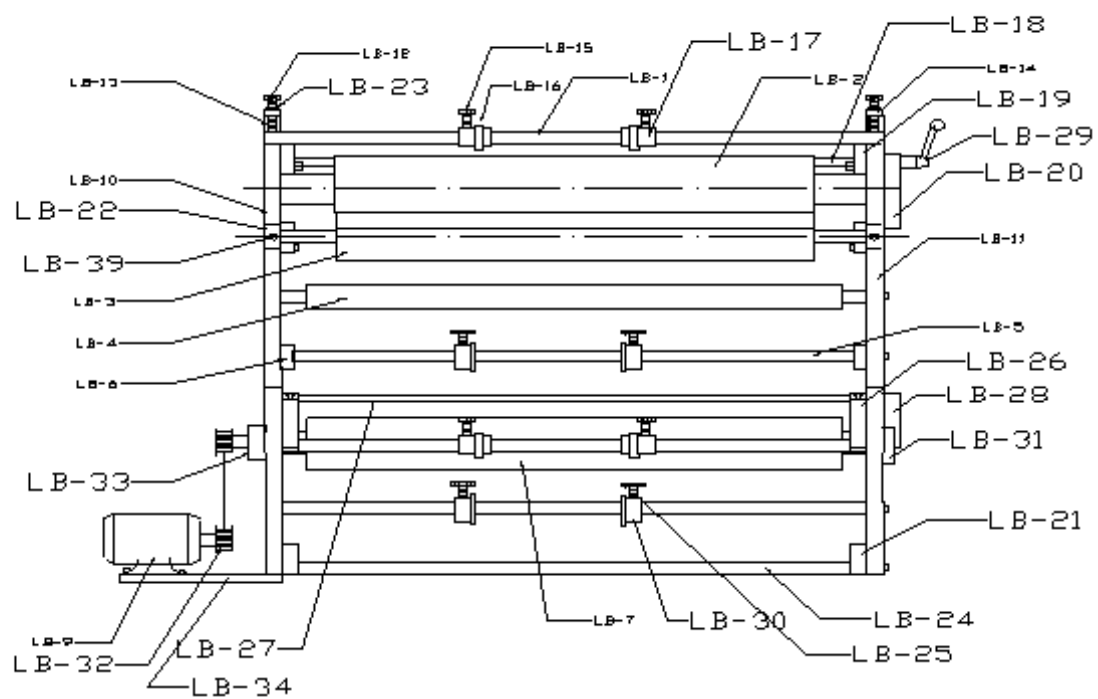
Note ; ※ ADD machine Oil(Once a day)

Add machine oil to the worm wheel box
ISO VG 680 machine oil is recommended

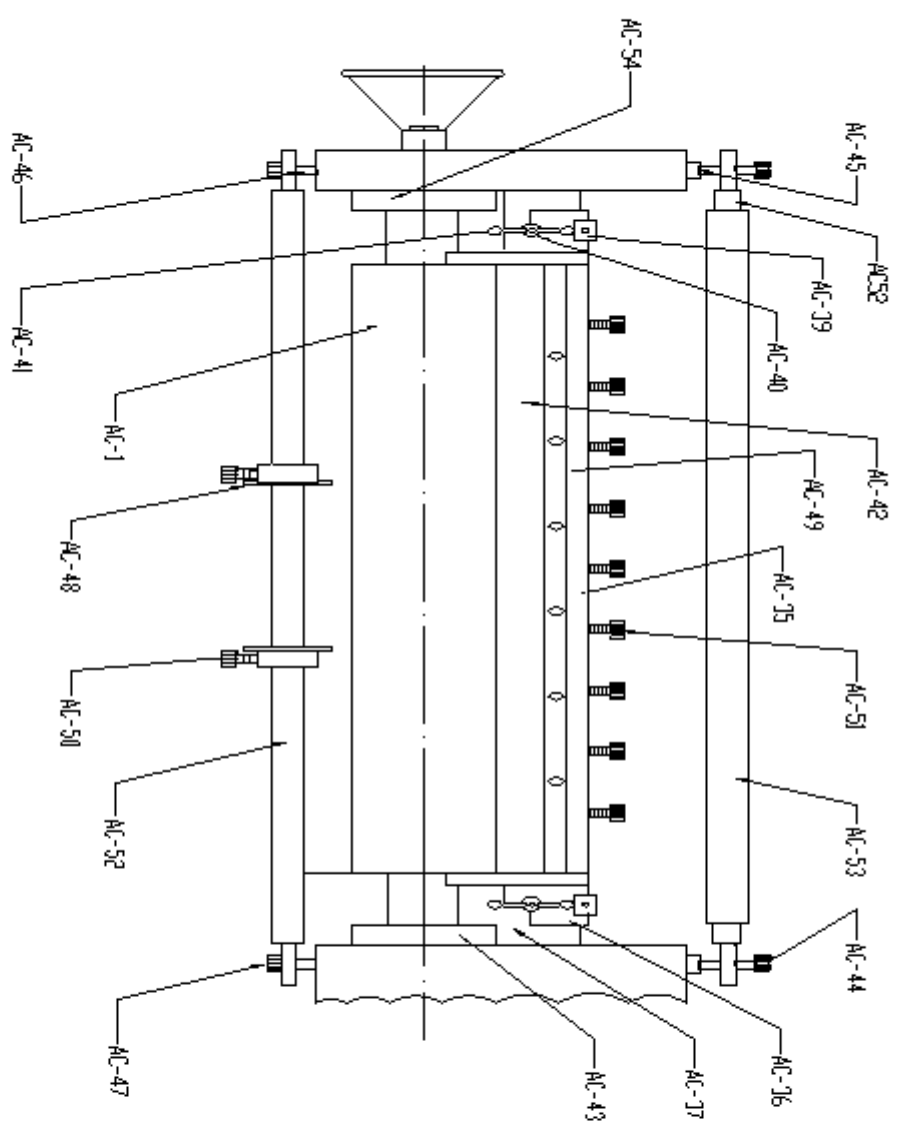


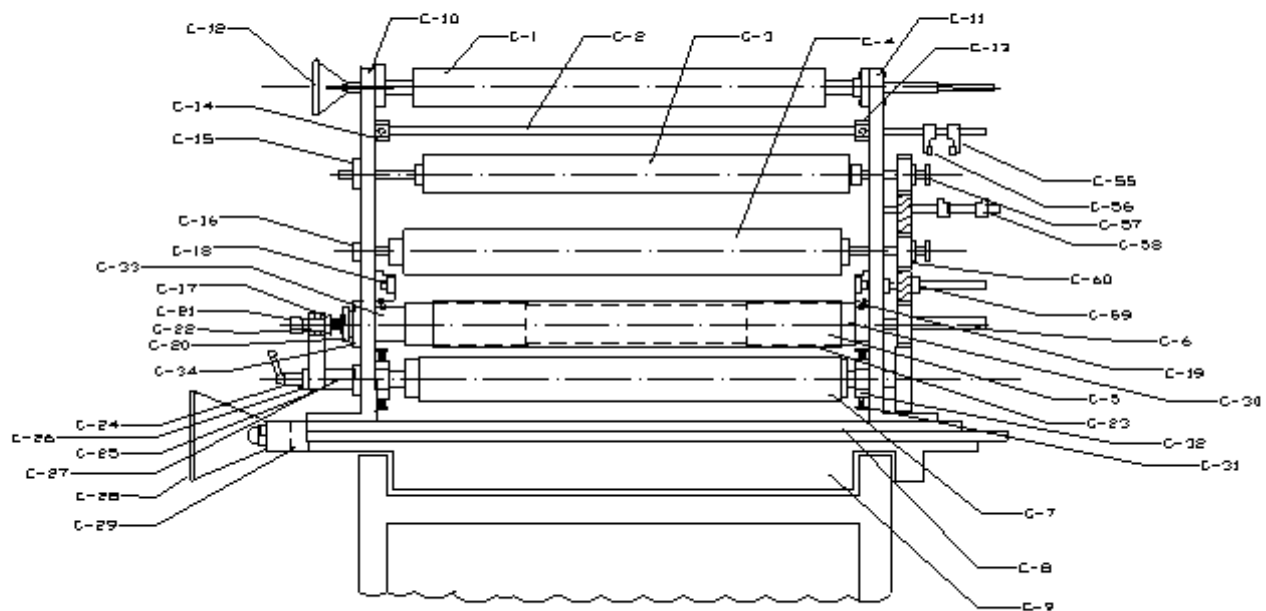


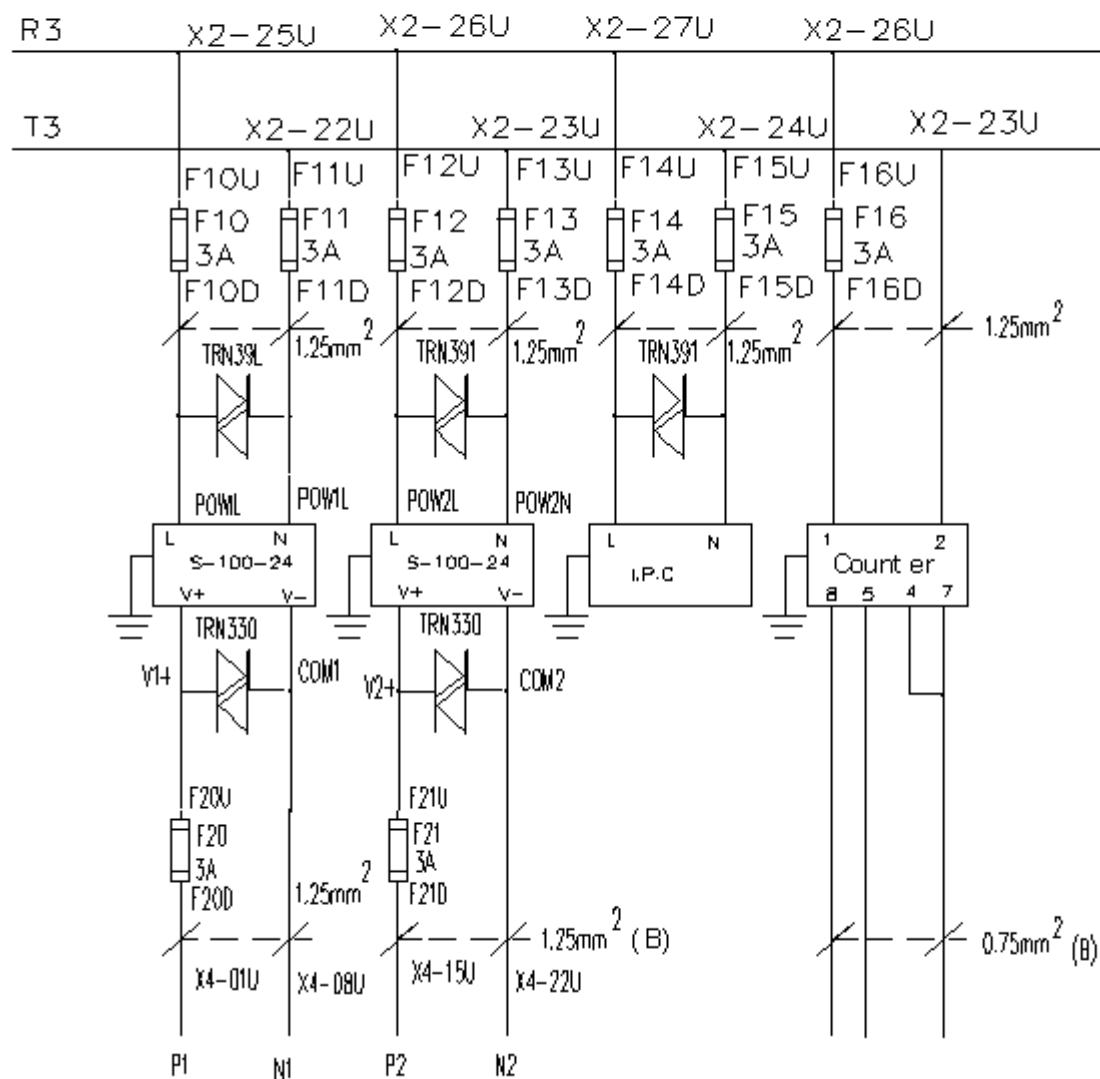
ADD grease(Once a day)

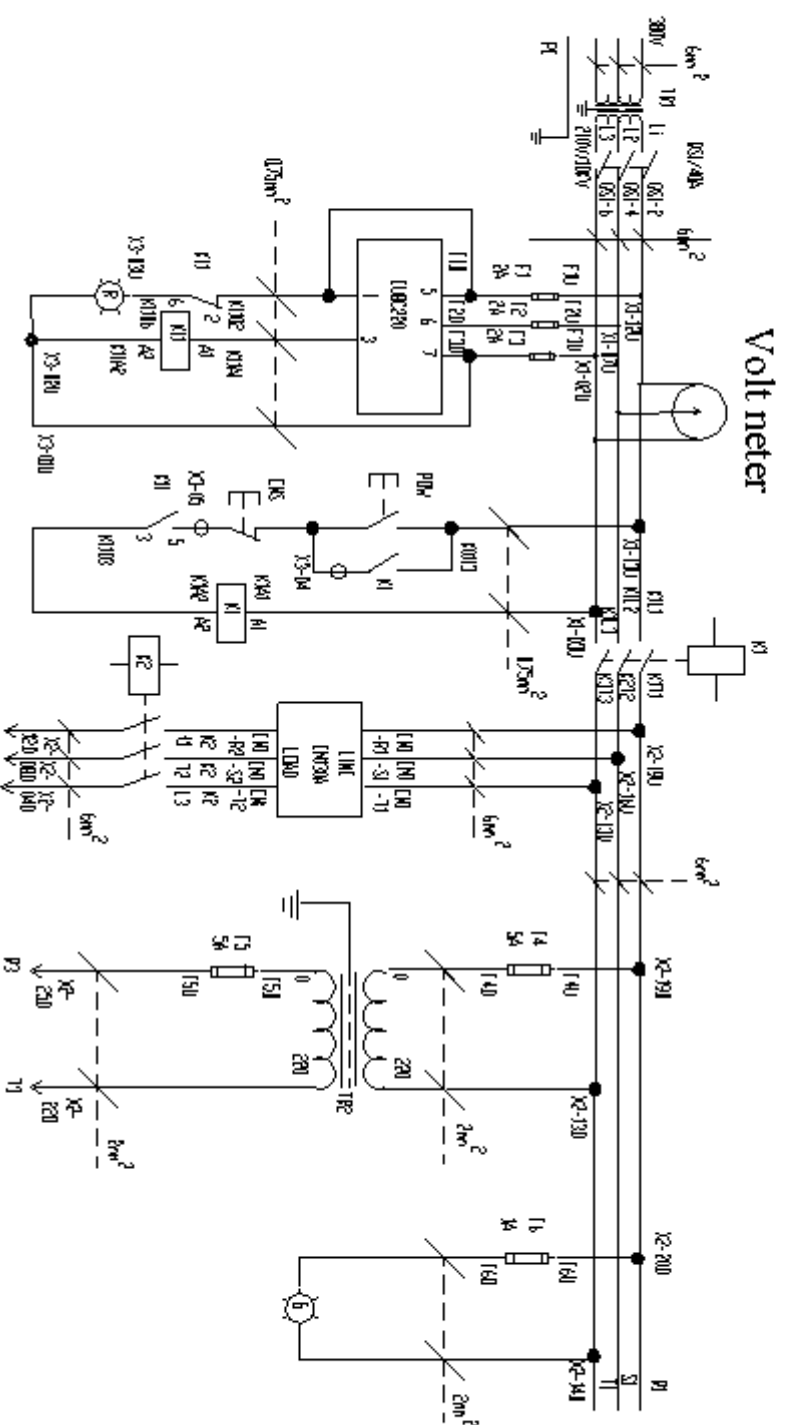


Clean up the foreign substance such as the paper glue on the clamping wheel iron core every day.







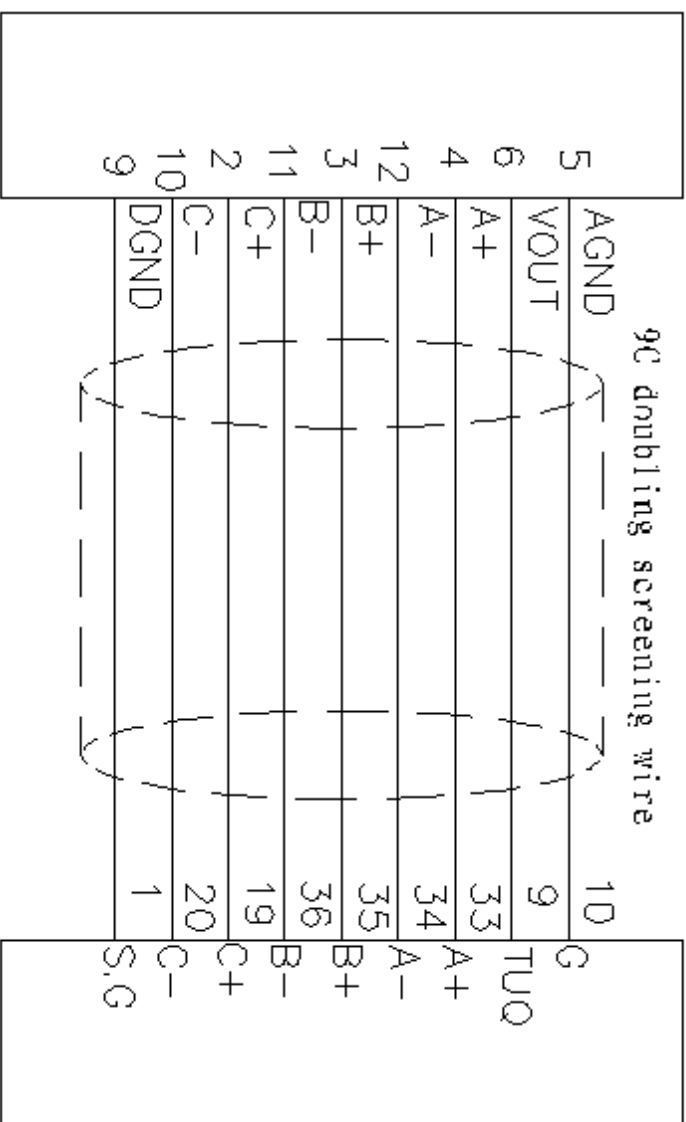


Power line filler
Main circuit of rotary letterpress

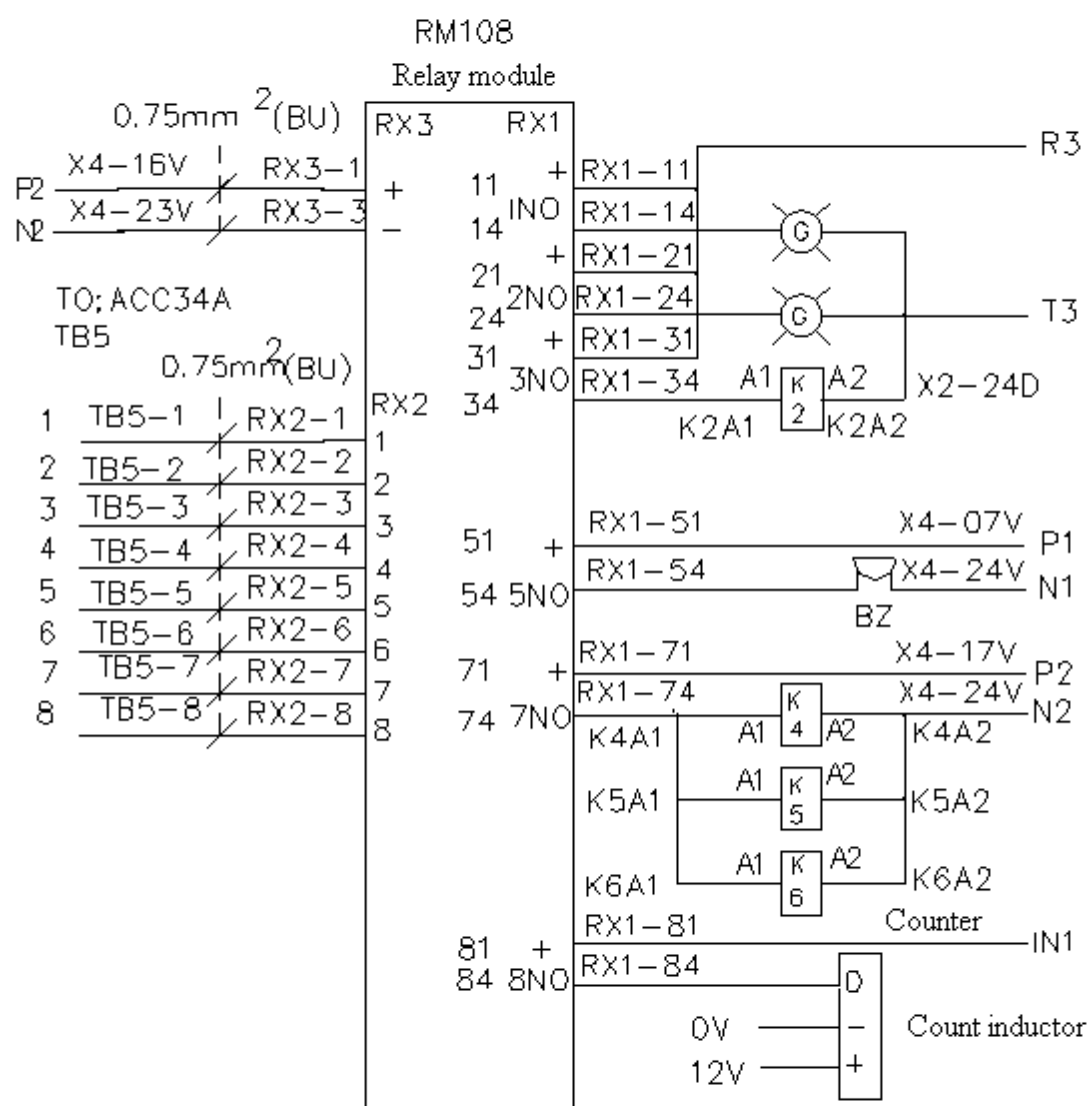
Servo driver

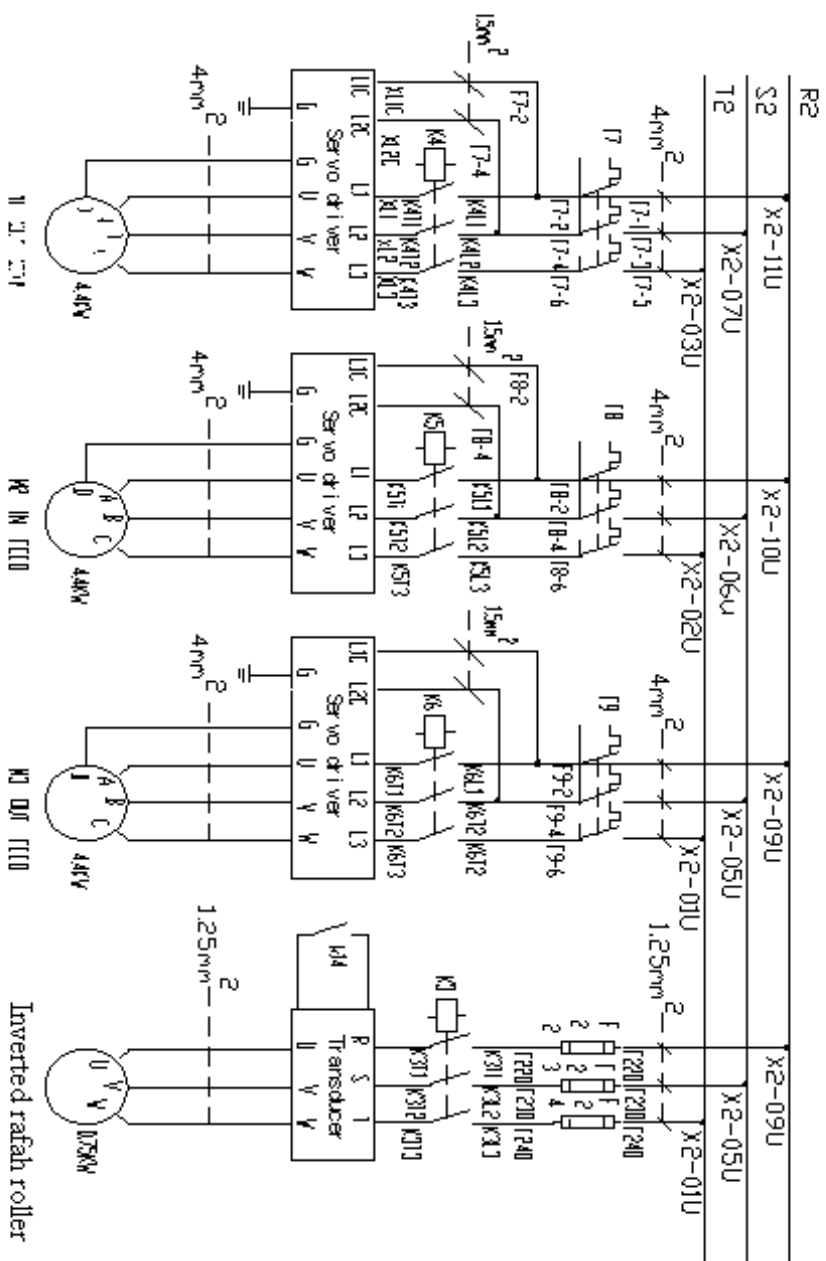
SCM1-30ADA/50ADA

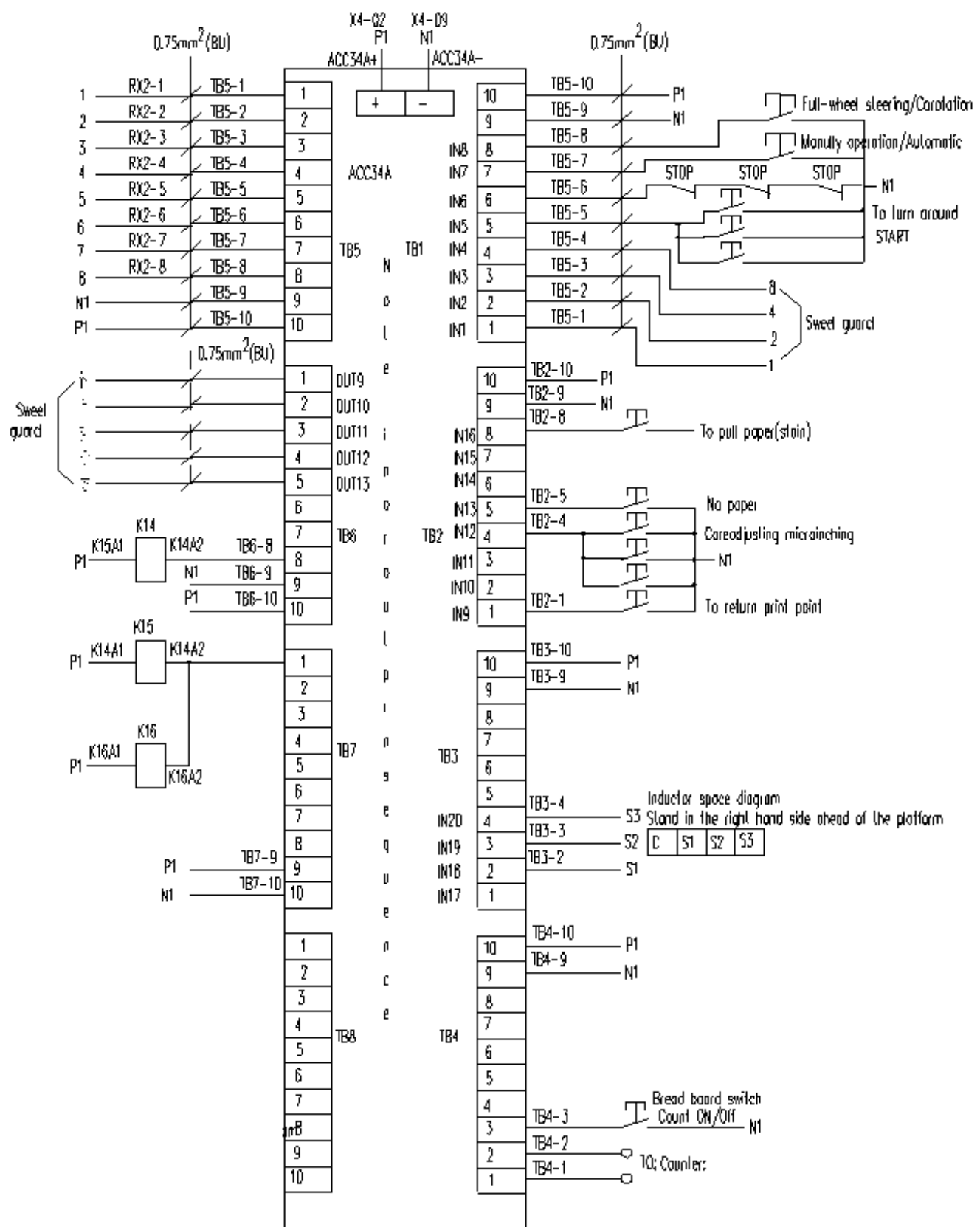
DB-15P(The metric system) X AXIS 50P CV1



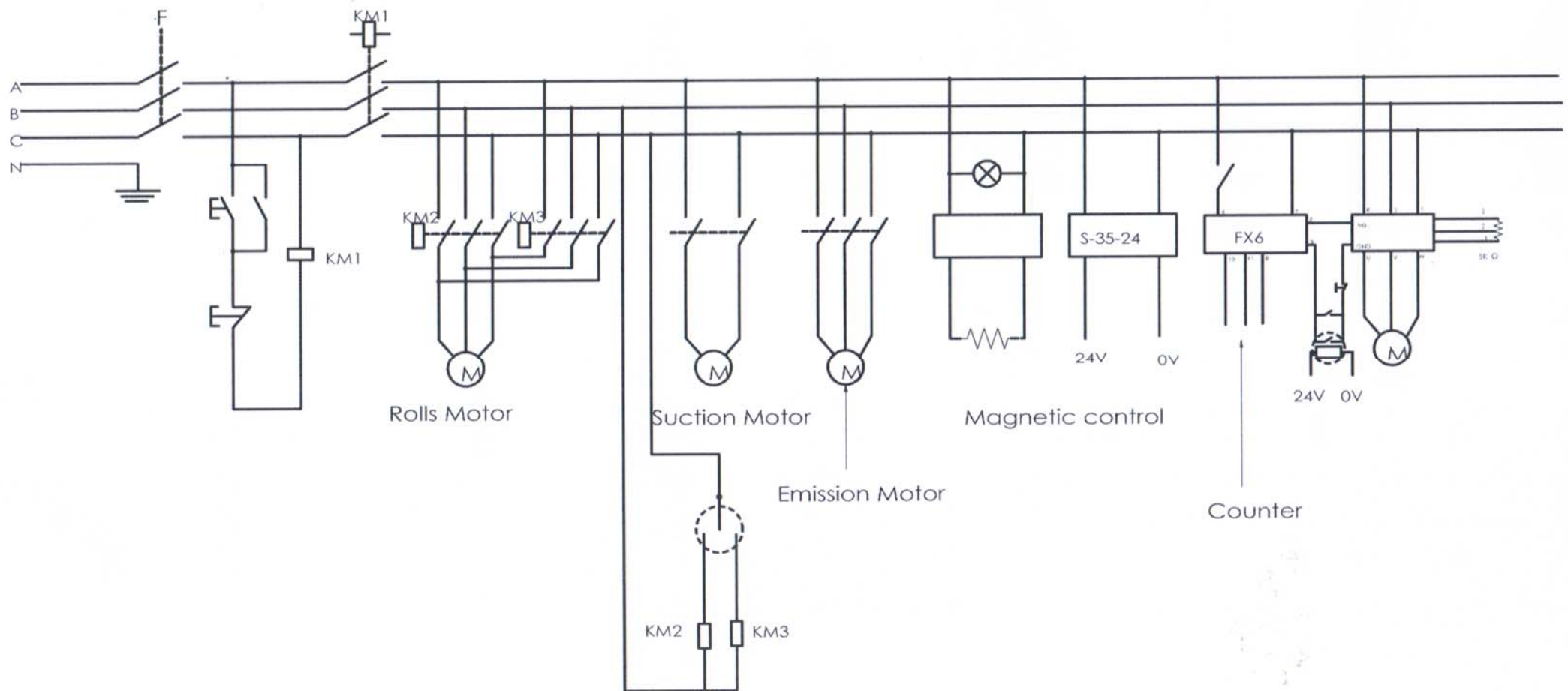
Rotary letterpress

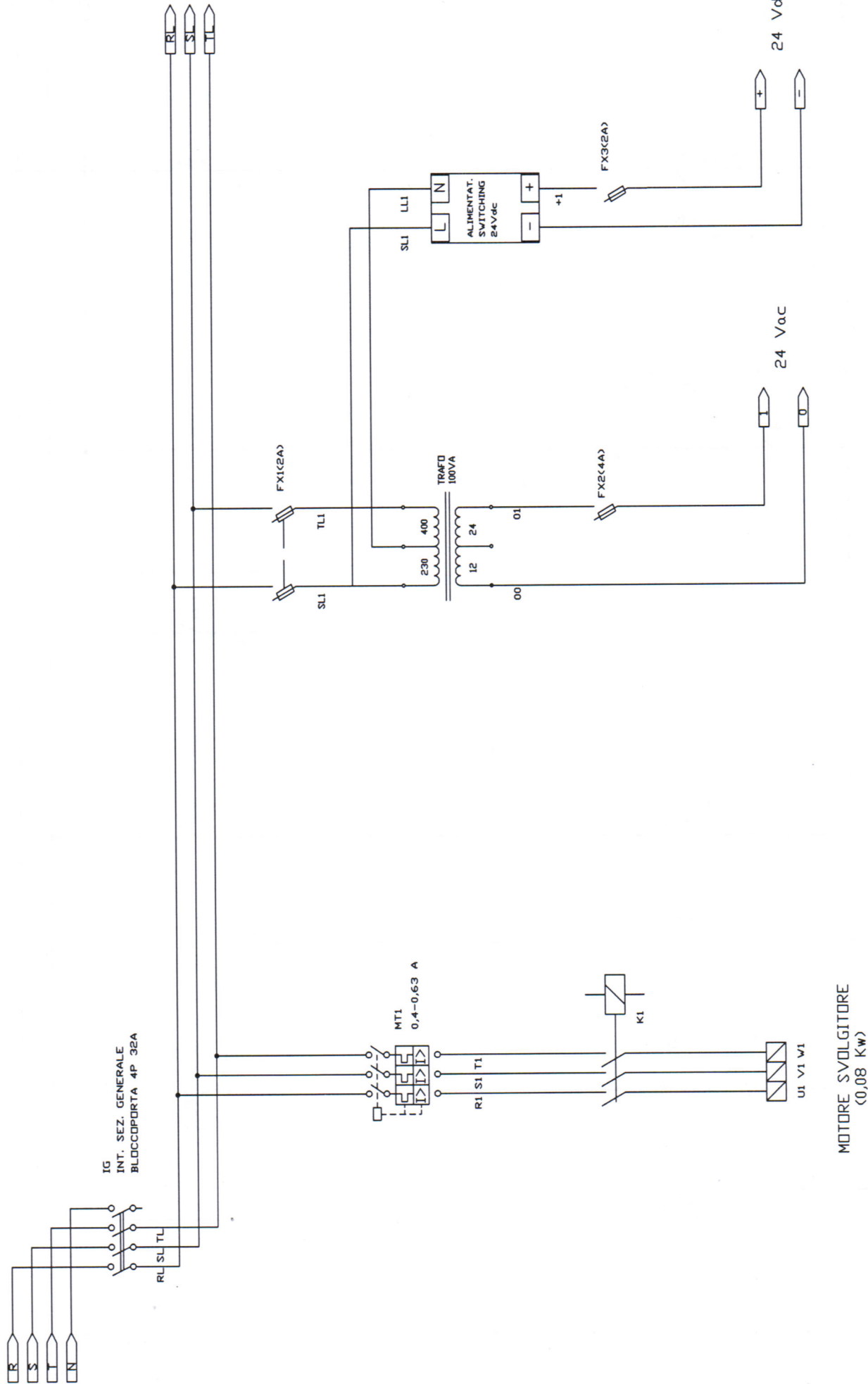






Electric drawing Rewinder



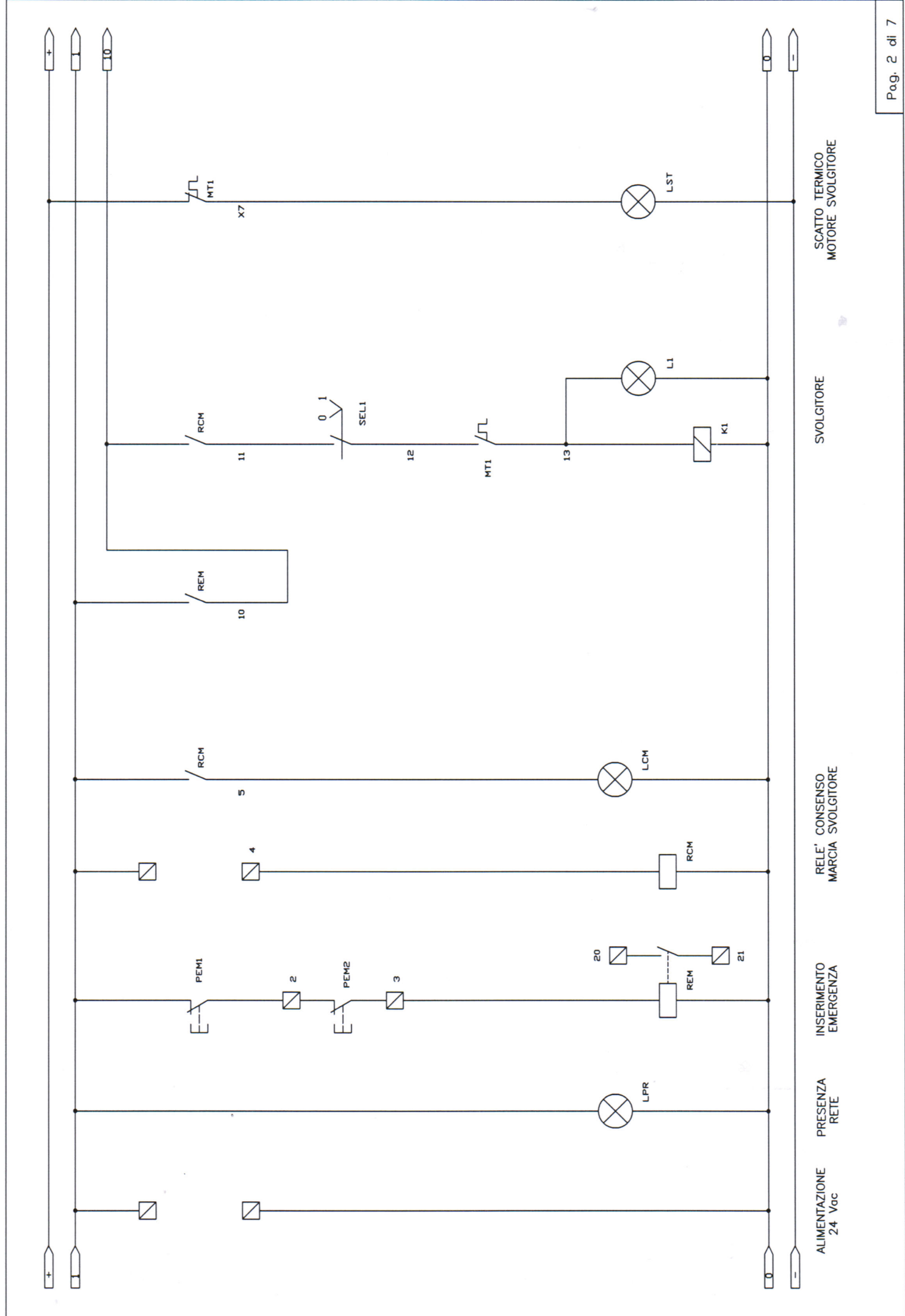


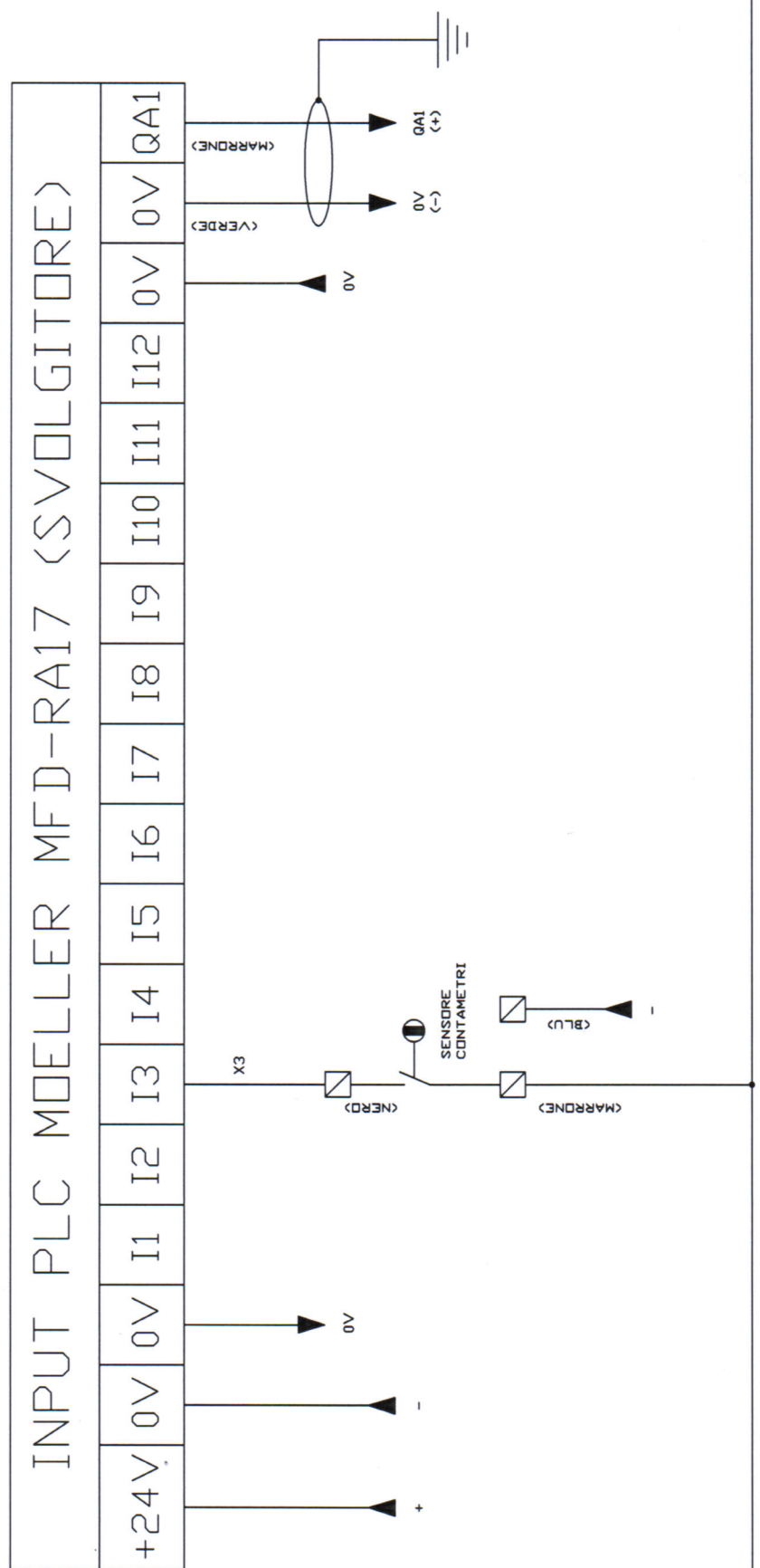
CANNONE VITO NICOLA
S.P. ANDRIA-TRANI Km. 1,500
ANDRIA (BA)

QUADRO ELETTRICO COMANDO
SVOLGITORE

Matr. n. 1D092/09

Data: 02/04/2009



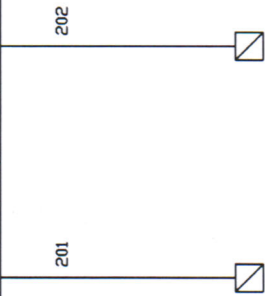


OUTPUT 0-10 V
A SCHEDA FRENDO
SVOLGITORE

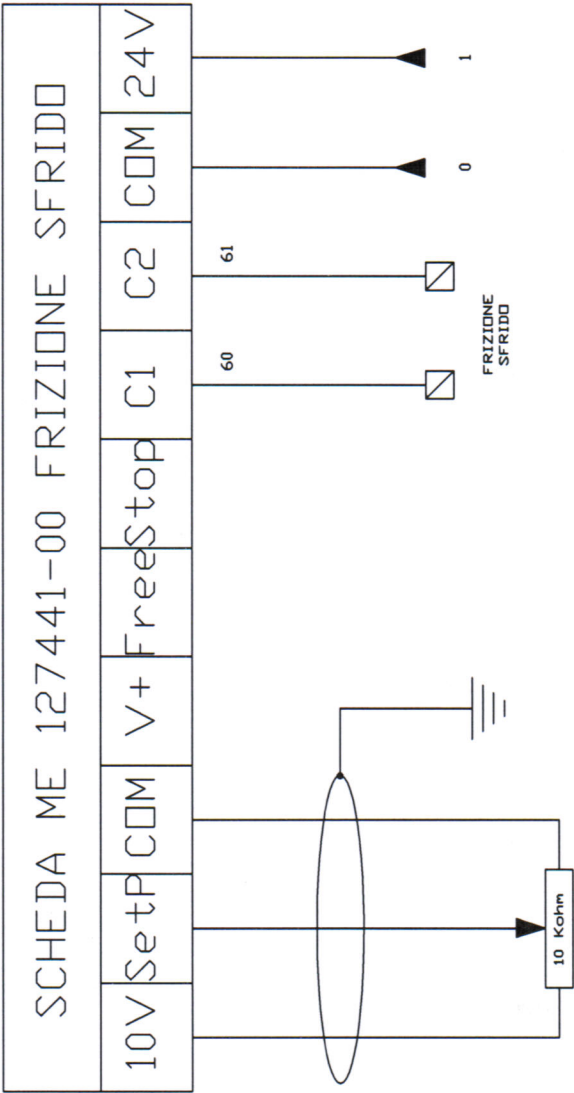
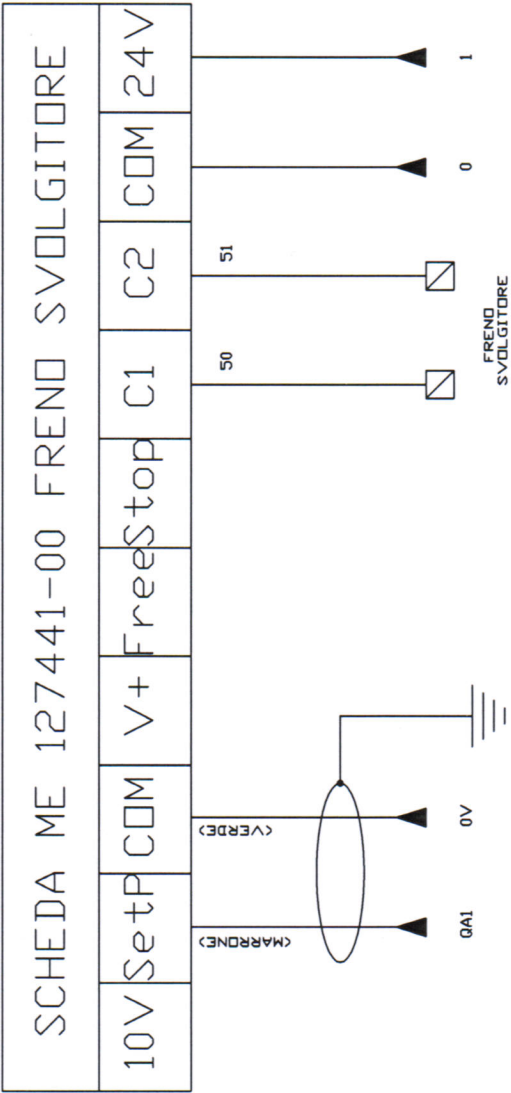
SENSORE CONTAMETRI

OUTPUT PLC MOELLER MFD-RA17 (SVOLGITORE)

Q1		Q2		Q3		Q4	
1	2	1	2	1	2	1	2



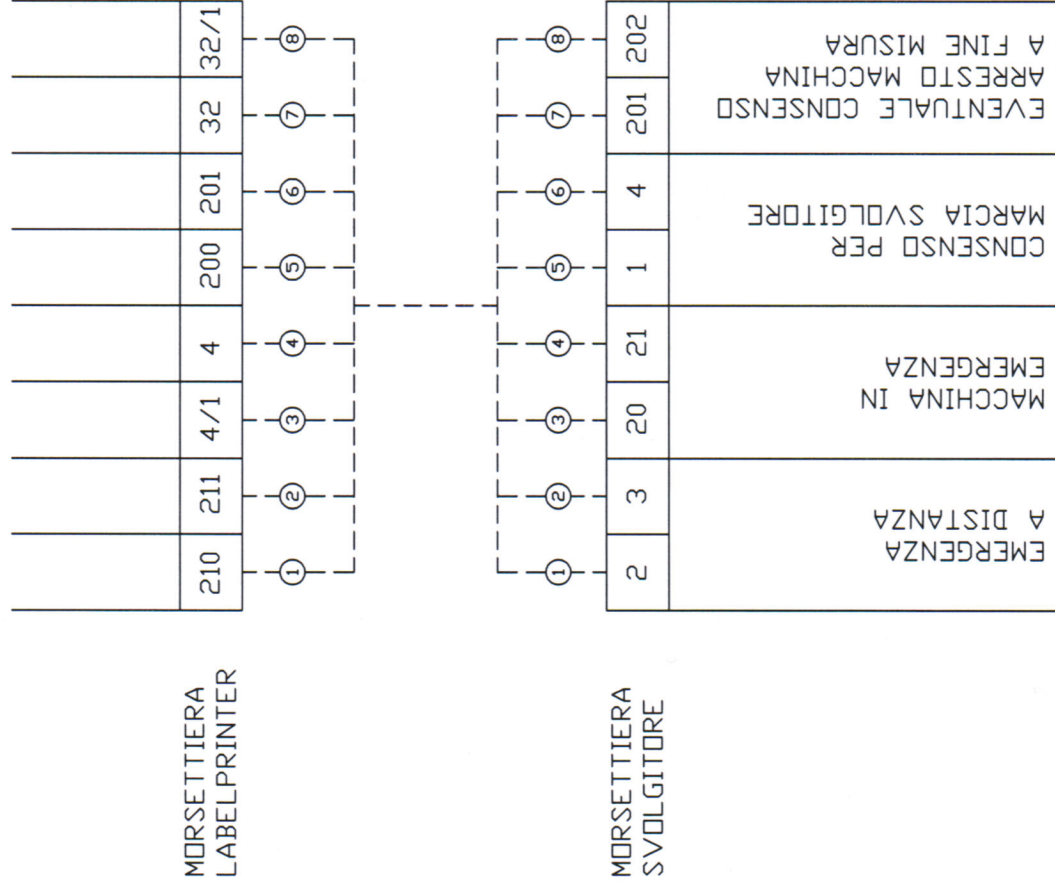
EVENTUALE CONSENSO
ARRESTO MACCHINA
A FINE MISURA



MORSETTIERA

R	S	T	N		U1	V1	W1		PRESENZA RETE 24Vac	FRENO SVOLGITORE	FRIZIONE SFRIDO	SENSORE CONTAMETRI	X3
INGRESSO RETE 3F+N 400V						MOTORE SVOLGITORE							

MORSETTIERA INTERFACCIA CON LABELPRINTER



PARAMETRI MFD SVOLGITORE

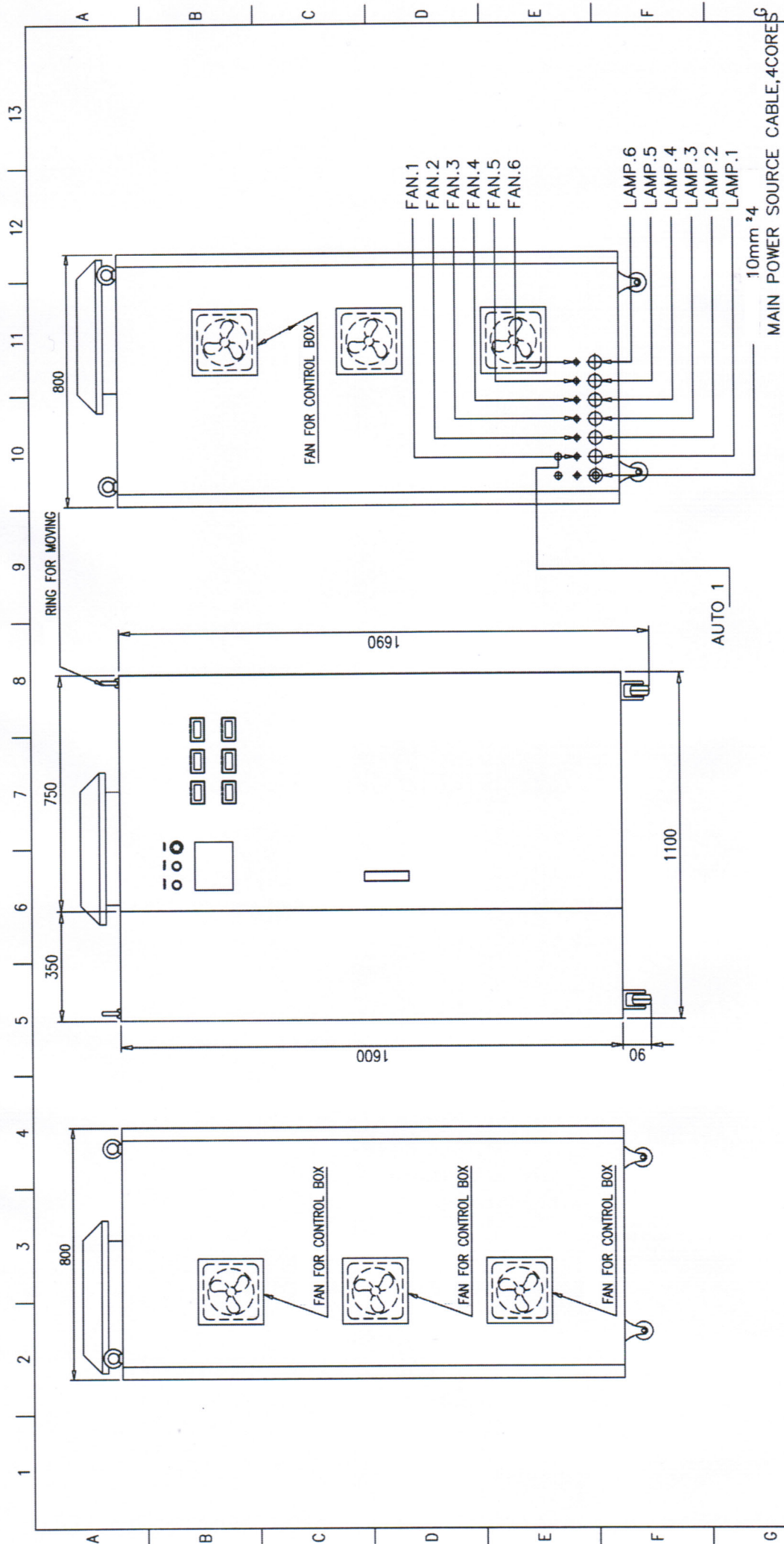
MFD MOELLER MISURA DECIMALE

AR05 = 371 (Divisore)

DB07 = 100 (Moltiplicatore)

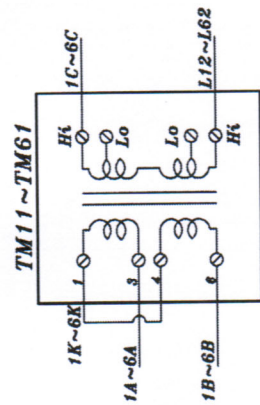
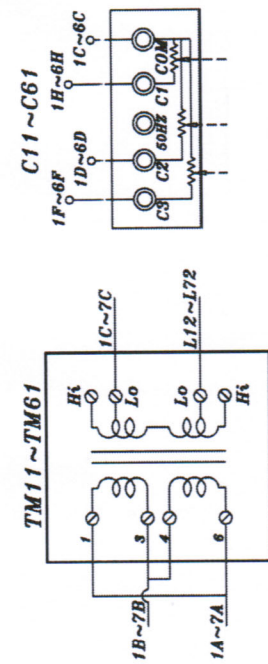
DB08 = 100 (Velocità macchina= 100mt/min)

T1 = 1 (tempo avviamento)



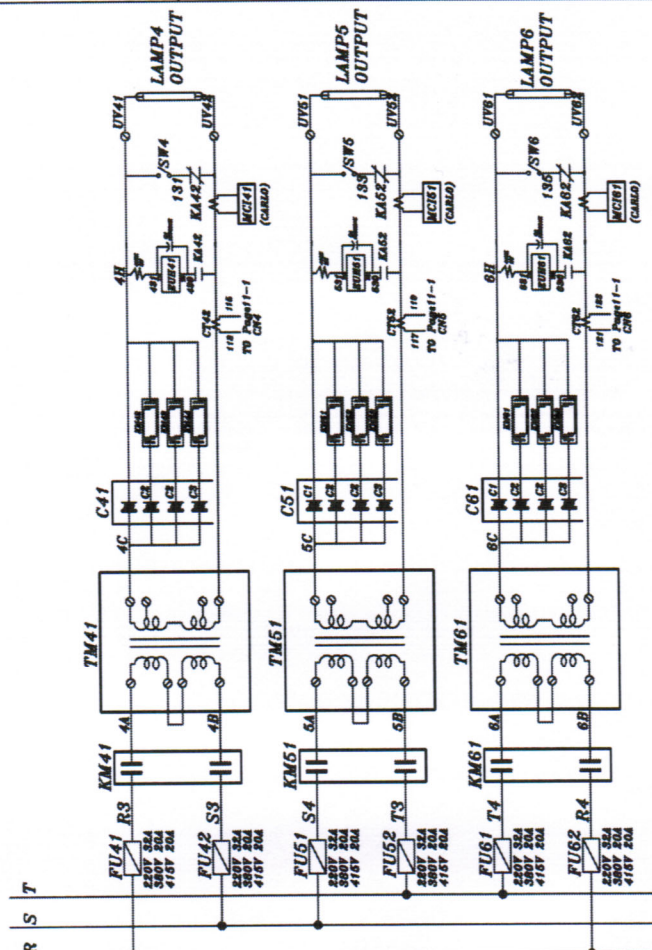
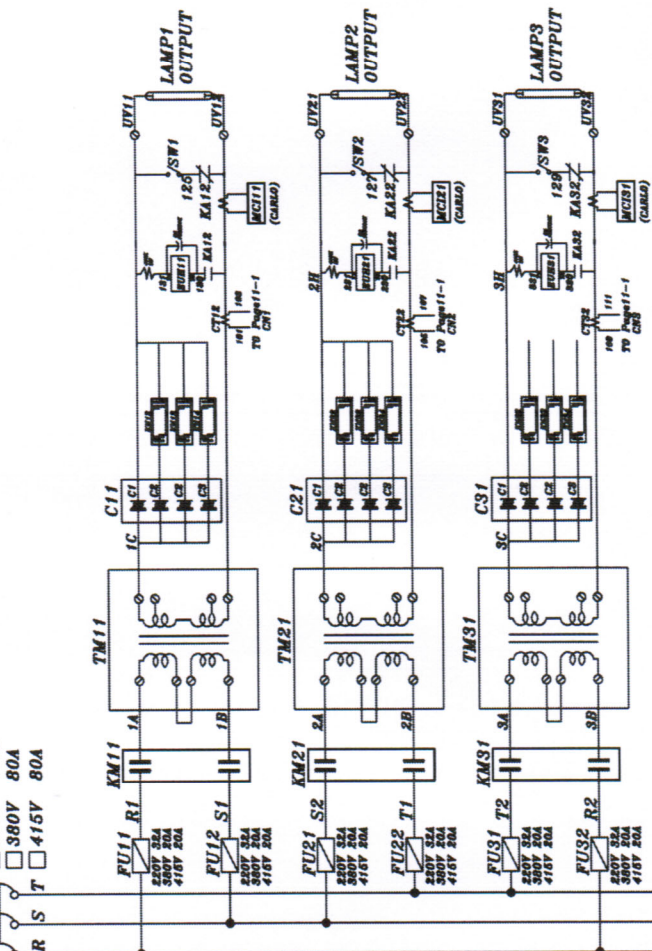
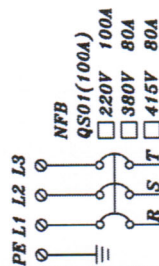
SH481365L	Specifications	?? : 486L1A0010AA
	Effective width	300mm
	UV LAMP kw*pcs	3.6kw*5pcs ; 4.8kw*1pcs
	Power source	380V/220V, 50Hz/60Hz 3Phase
	Machine dimension	220V/75A, 380V/45A
	Machine weight	-
	: mm	: 1/12
		: 2006.04.22

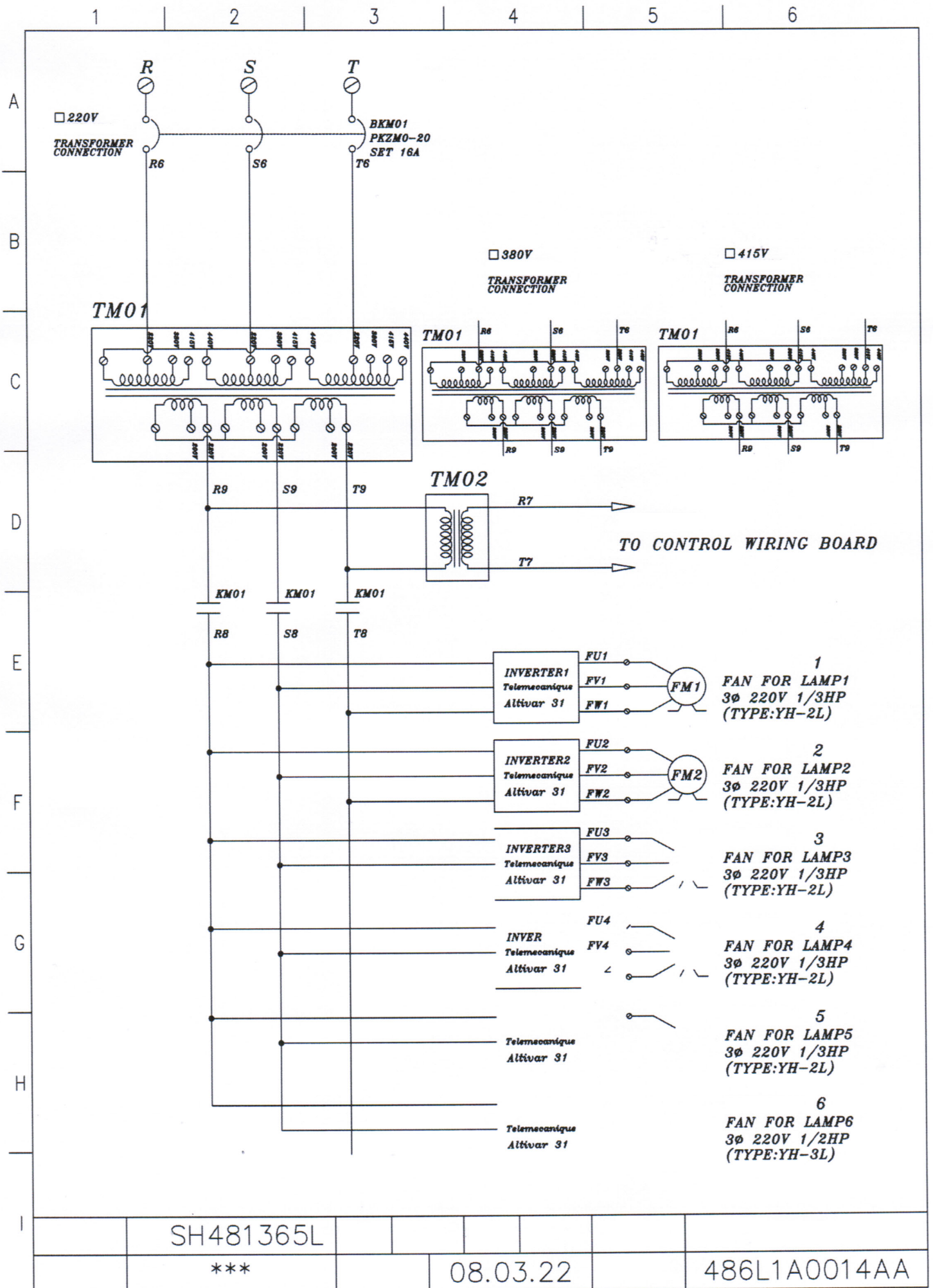
1 2 3 4 5 6 7 8 9



□ 200V
□ 220V TRANSFORMER & CAPACITOR CONNECTION
□ 240V

□ 380V
□ 415V TRANSFORMER & CAPACITOR CONNECTION





A

B

C

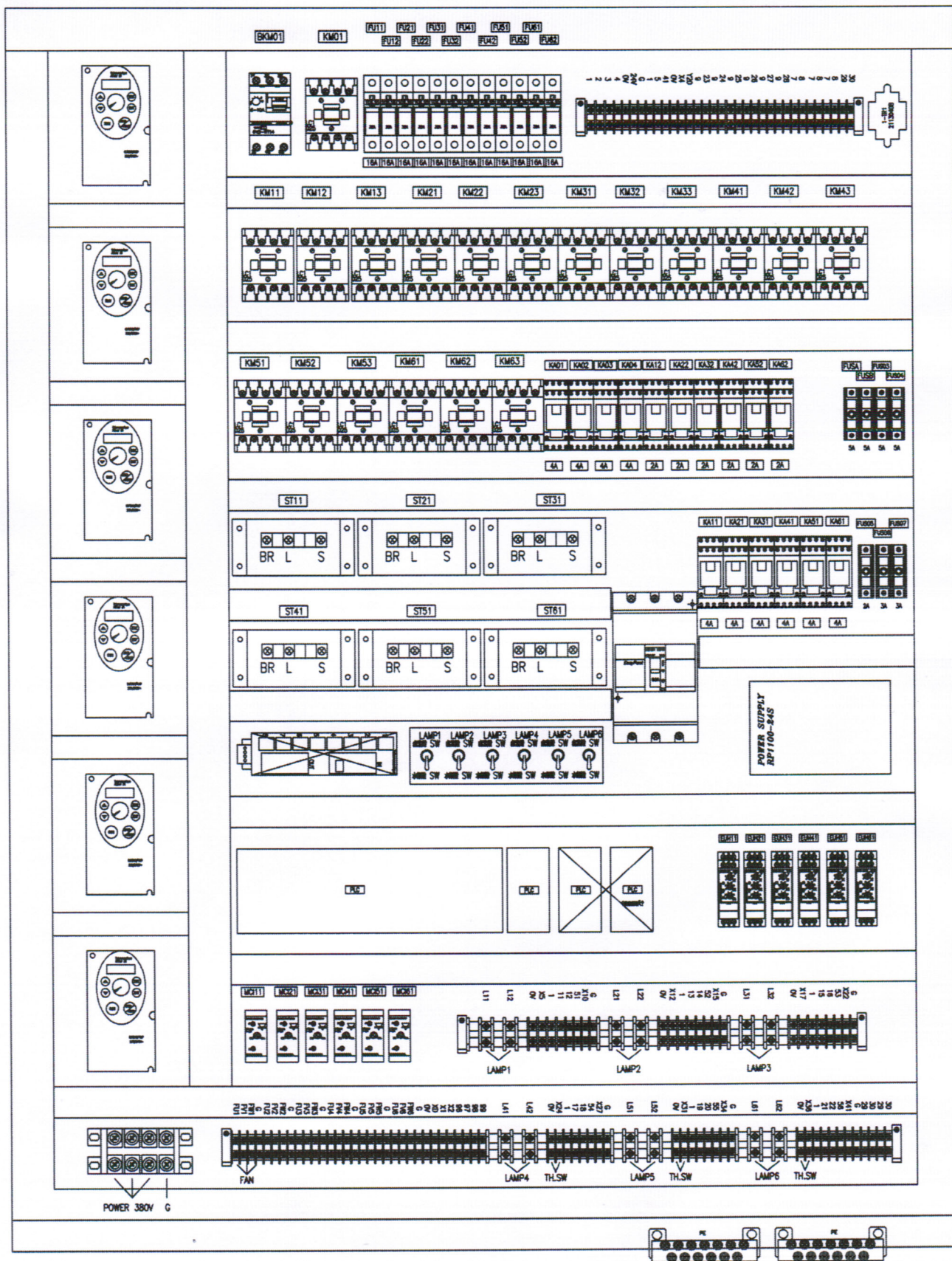
D

E

F

G

H



SH481365L

08.03.22

486L1A0012AA

