



# GYS Automation

Solutions for robots, cobots and PLCs



|          |                                            |           |  |  |  |
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# THE GROUP



## A strong family-owned group



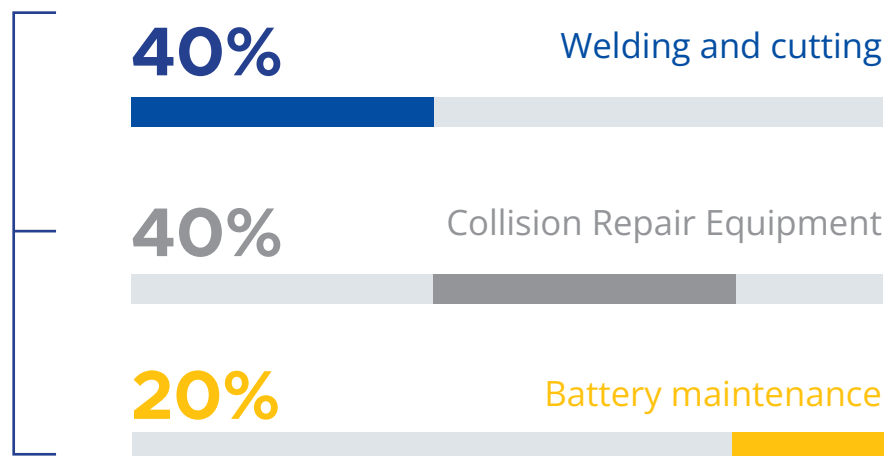
**Bruno Bouygues**  
CEO



### Key figures 2023



### 3 business areas



## Specialist teams at your service



**Europe's leading welding machine manufacturer**



An R&D department with **90 specialist experts**



**A free, web-based platform** simplifies choosing the correct equipment for an automation project



**Multi-brand compatibility** (robots, torches and consumables, etc.)



Contact us by **email, telephone or video conference**, you can even check the online forum for further advice.



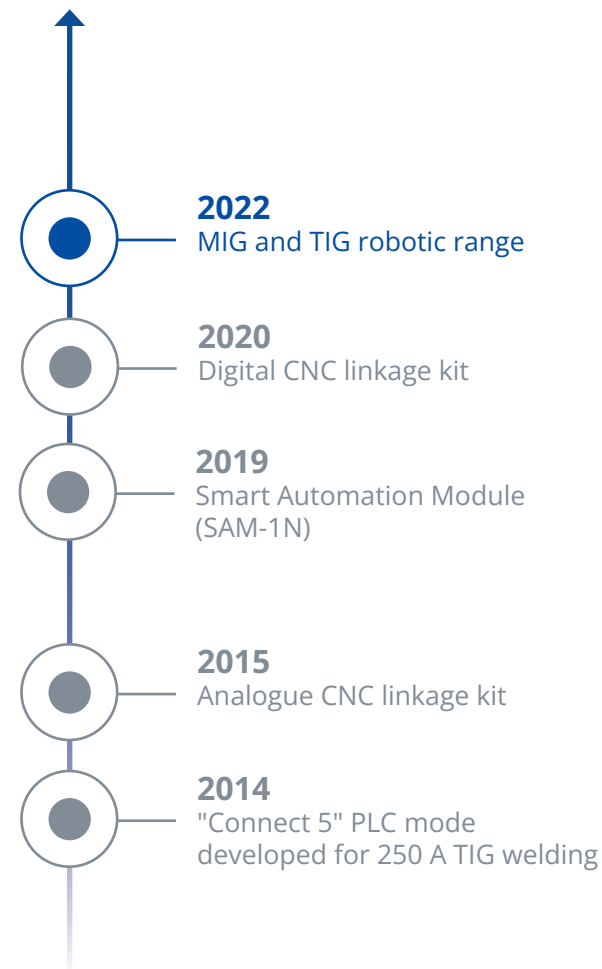
A **responsive after-sales service team** is waiting for all your welding queries



Quick delivery and commissioning times



3,000 parts in stock all year round



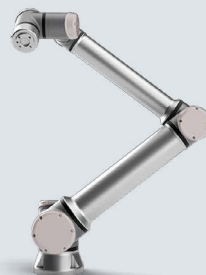


### An automated solution for every situation



**Poly-articulated robot**

An industrial robot is a multi-axial device, similar to a human arm; they often have six degrees of freedom, three for positioning and three for orientation, this allows them to move and align a tool in a given workspace.



**Cobots, a collaborative robot**

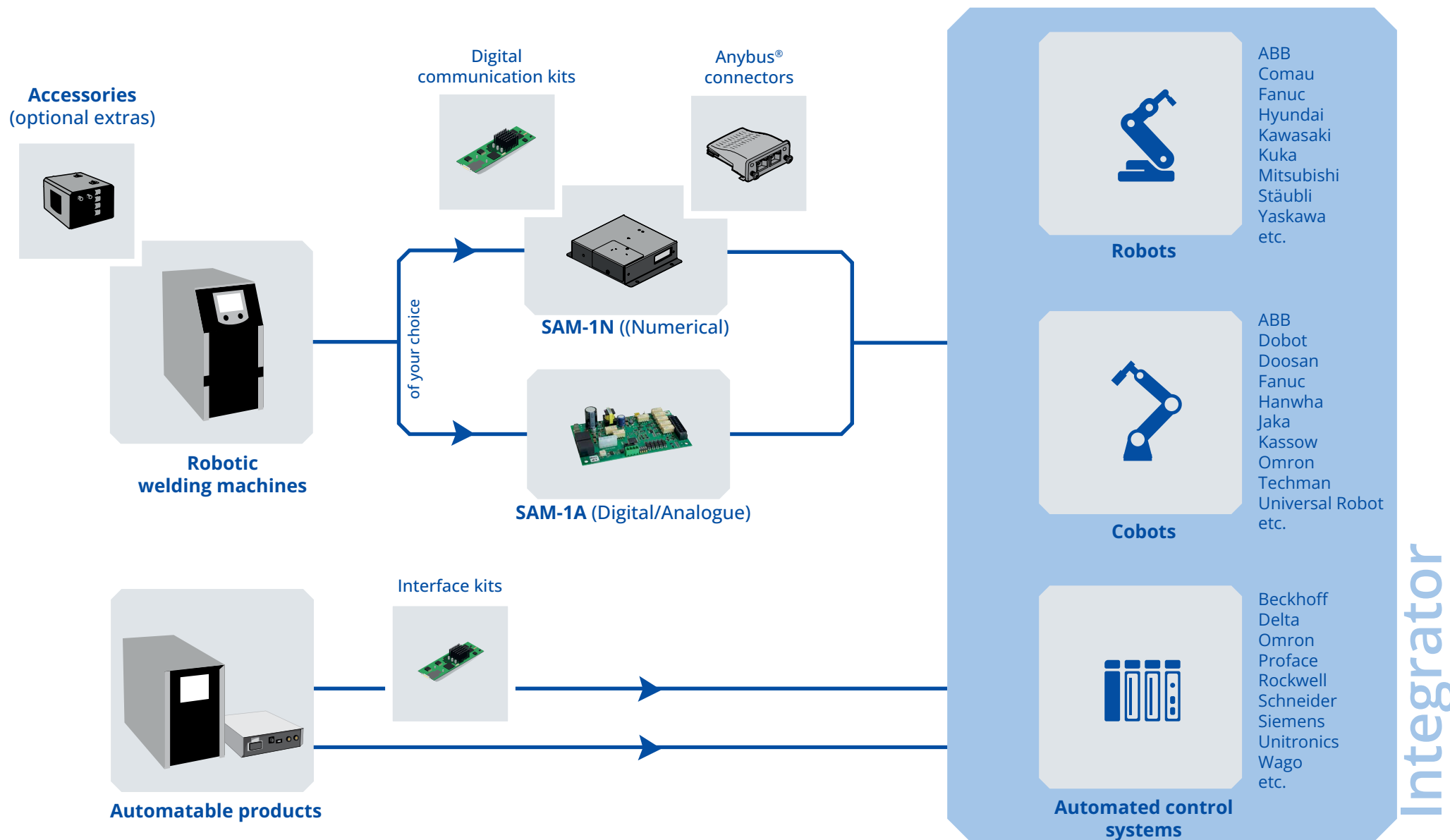
A collaborative robot, also known as a cobot, is a robot capable of learning multiple tasks to assist humans. Cobots are designed to operate alongside operators without the need for physical safety measures, such as safety barriers, and are very easy to use and install.



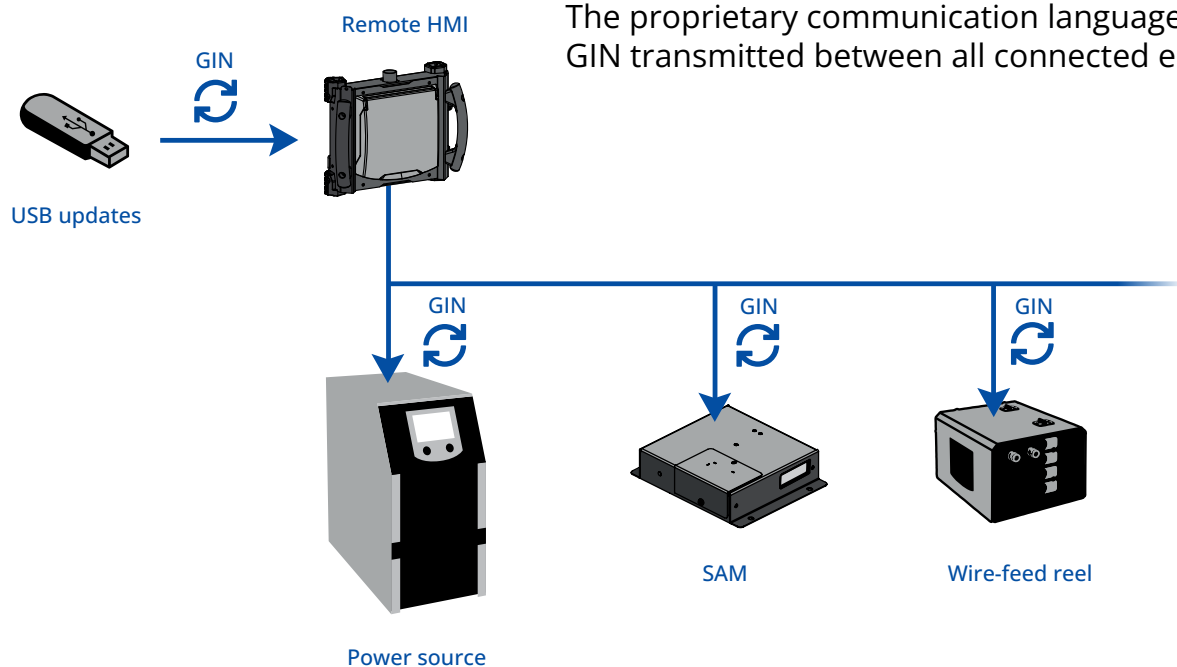
**PLC  
(Programmable Logic Controller)**

The PLC (Programmable Logic Controller) is based on the same principle as a computer and has inputs and outputs to control machines on a production line.

## GYS, a simple and efficient ecosystem



### GIN, GYS' internal communication protocol



The proprietary communication language or 'GIN' (GYS Internal Network) allows data to be GIN transmitted between all connected equipment.



Easy to use: a single update will upgrade all connected products



Quick to set up



Automatically recognises GYS products

## Online configurator supports users with selecting the correct equipment

**PRÉSENTATION SOLUTIONS ROBOTIQUES**

Présentation **TÉLÉCHARGER**

**FORUM**

Discussions / Tutoriels >

Foire Aux Questions

**PHOTOS**

Sélection de la marque: **ABB**

**KITS DE CONNECTIVITÉ**

Vidéos d'Intégration - Youtube >

Brochure Accessoires avances automatisation >

**CONFIGURATOR**

1 Choisissez votre procédé de soudage

**MIG** **TIG** **PLASMA**

2 Sélectionnez votre équipement d'automatisation

**ROBOT** **COBOT** **PLC**

| Marque            | Référence du bras | Référence du contrôleur |
|-------------------|-------------------|-------------------------|
| ABB               | GoFa CRB 15000    | IRC5                    |
| FANUC             | IRB 1400          | IRC5_Compact            |
| KAWASAKI          | IRB 1600          | IRC5_PanelMounted       |
| KUKA              | IRB 2600          | OMNICORE                |
| STAUBLI           | IRB 4600          | S4C-S4C_PLUS            |
| YASKAWA / MOTOMAN | IRB 6600          | Autre                   |
| Autre             | IRB 1520ID        |                         |
|                   | <b>IRB 1660ID</b> |                         |
|                   | IRB 2600ID        |                         |
|                   | Autre             |                         |

Sélectionnez votre équipement GYS

1. SANS ROBOT STANDARD

→ Ajouter un deuxième dévidoir

Refroidissement

Commande déportée

**Générateur**

NEOPULSE 500 G

KIT ALUMI 1

SAMA-1N (Numerical Smart Automation Module)

Module de communication 5

Automation Firmware

Ind 014503\_R\_V24A

Download

Refroidissement

Groupe froid NEOCOOL (p)

Liquide de refroidissement spécial soudage - S1

Dévidoir 1

Dévidoir robotique SMARTFEED

Faisceau de liaison MIG rob

KIT N°3 - Fixation SMARTFEED

KIT N°20 - Fixation faisceau robotique - Option SMARTFEED

KIT N°25 - Fixation faisceau robotique type A

4. Téléchargement

**CONFIGURATION**

Récapitulatif de la configuration

**BACK-END**

Fichiers d'installation - 3D modèles Logiciel, fichiers de mappage des données (PCL)

**FRONT-END**

Interface utilisateur, Add On, Bloc fonctionnel PLC

**Foire Aux Questions**

- L'écran de la MMI GYS est vide
- L'écran de la MMI GYS affiche ---A ---V
- Le voyant LX3 est éteint sur le SAM-1N
- Sur le SAM-1N le voyant LX1 est vert et LX3 clignote
- Sur le SAM-1N le voyant LX1 est rouge et LX3 est vert
- La valeur de Num\_Bad\_Param est à 72 sur le SAM-1N
- La valeur de Num\_Bad\_Param est à 151
- Un code erreur apparaît sur la MMI GYS

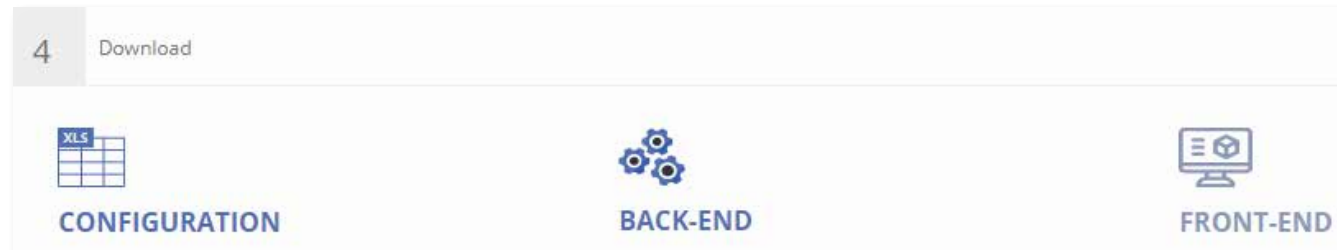
### Firmware for GYS automation



*Our power sources are delivered without specific firmware for automatic and robotic applications.*

These specific firmwares are only available on the GYS configurator, under the choice of power Source.

### One-click downloadable set-up documents



#### Configuration

Overview of the required configuration in an Excel format with the GYS equipment required for automation.

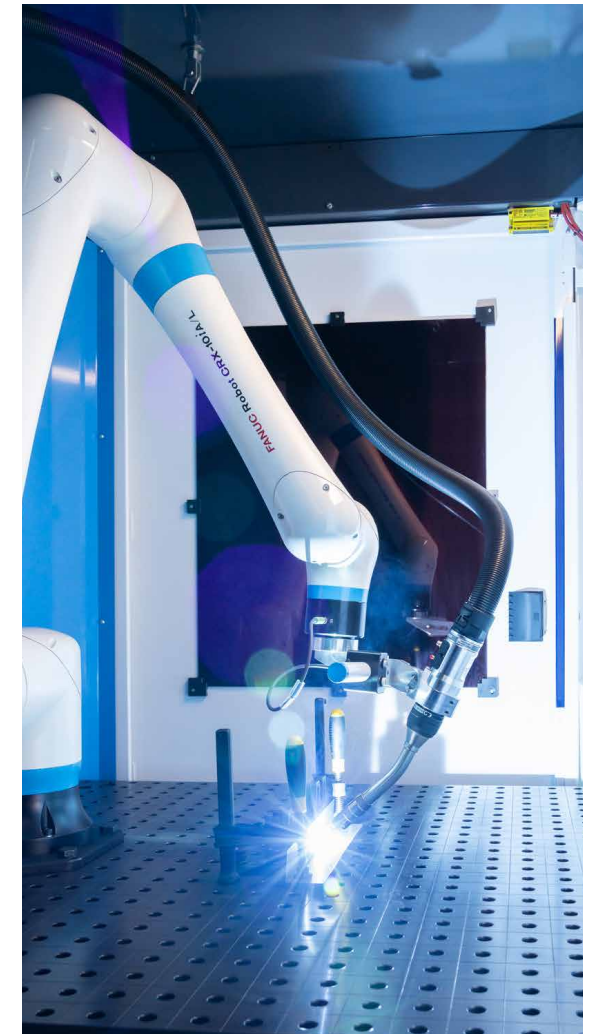
#### Back-End

Folder containing all the set-up documents:

- 3D models (.step)
- IP Configuration
- Software
- EDS/GSD files
- Data mapping files

#### Front-End

URcap software  
Example programs  
Tools



### A dedicated forum to consult our engineers


**AUTOMATION FORUM**  
 Support and Discussion Community

[Quick links](#)
[FAQ](#)
[Notifications](#)
[Private messages](#)

[Board index](#)

| FORUM                                                                             |                                                                       | Topics | Posts | Last post                                                                                                                                                 |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Robots/Cobots</b><br>Discussion about Robots                       |        |       | <b>Re: Parameter's values not</b><br>by Paul <br>Tue 7 Sep 2021 13:59    |
|  | <b>PLC</b><br>Discussion about Programmable Logic Controllers         |        |       | <b>Re: Rockwell compatibility</b><br>by Etienne <br>Tue 5 Jan 2021 10:28 |
|  | <b>Analogic Bridges</b><br>Discussion about GYS analog bridges        |        |       | No posts                                                                                                                                                  |
|  | <b>Numeric Bridges</b><br>Discussion about GYS numerical bridges      |        |       | <b>Re: Error on SAM-IN</b><br>by CobotWeld <br>Mon 9 Aug 2021 08:00      |
|  | <b>Welding equipments</b><br>Discussion about GYS automation products |        |       | <b>Re: No COM with Neopulse</b><br>by Etienne <br>Tue 5 Jan 2021 14:06   |


**ABB**  
 Discussion about ABB robots/cobots


**DOOSAN**  
 Discussion about Doosan cobots


**FANUC**  
 Discussion about FANUC robots/cobots


**KAWASAKI**  
 Discussion about Kawasaki robots


**KUKA**  
 Discussion about Kuka robots


**MITSUBISHI**  
 Discussion about Mitsubishi robots


**PANASONIC**  
 Discussion about Panasonic robots


**TECHMAN**  
 Discussion about Techman Cobots


**UNIVERSAL ROBOT**  
 Discussion about Universal Robot cobots

<https://forum.gys.fr>





## GYS products that can be automated



### MIG welding

Three phased

EXAGON 400 FLEX  
NEOPULSE 320 C  
NEOPULSE 400 CW  
NEOPULSE 400 G  
NEOPULSE 500 G



### TIG welding

Single phased

TITAN 231 DC FV  
TITANIUM 230 AC/DC

Three phased

TITAN 321 DC  
TITAN 400 DC  
TITANIUM 400 AC/DC



### Plasma cutters

CUTTER CT  
CUTTER 45 CT  
CUTTER 70 CT

NEOCUT  
NEOCUT 105  
NEOCUT 125



### Charge holding

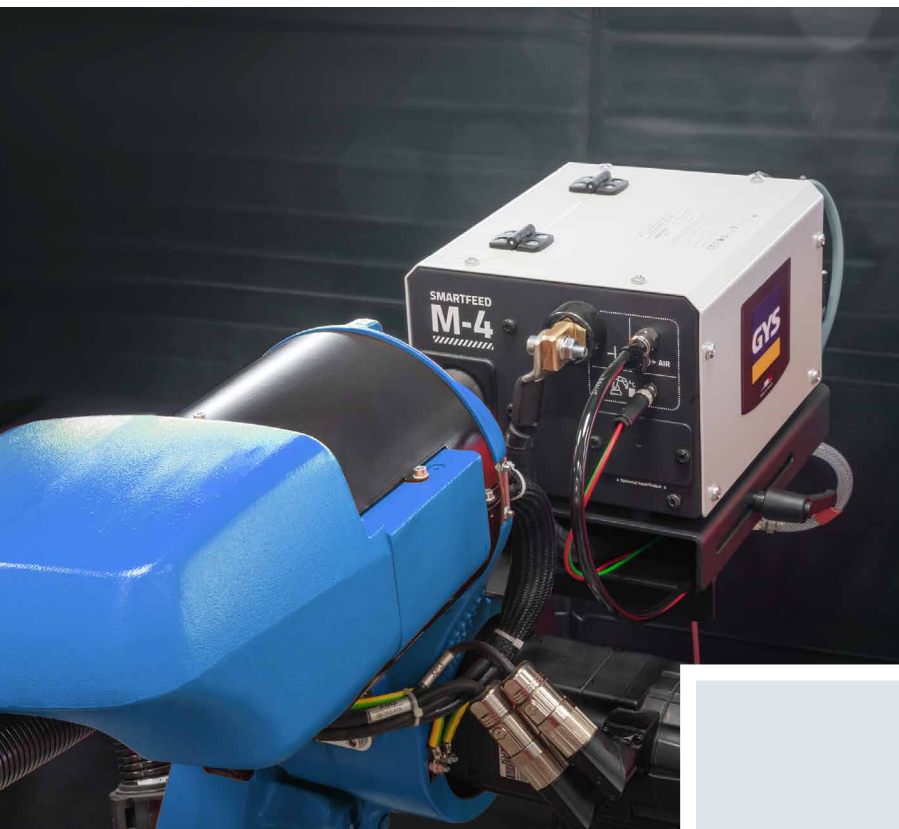
GYSFLASH

GYSFLASH 148.12 CNT  
GYSFLASH 158.12 CNT



| Products              | 100% duty cycle | Built-in wire-feed reel | SAM-1A<br>(Digital/Analogue) | SAM-1N<br>(Numerical) |
|-----------------------|-----------------|-------------------------|------------------------------|-----------------------|
| <b>MIG</b>            |                 |                         |                              |                       |
| 3~ EXAGON 400 FLEX    | 350 A           | -                       | ✓                            | -                     |
| 3~ NEOPULSE 320 C     | 280 A           | yes                     | ✓                            | ✓                     |
| 3~ NEOPULSE 400 CW    | 360 A           | yes                     | ✓                            | ✓                     |
| 3~ NEOPULSE 400 G     | 360 A           | -                       | ✓                            | ✓                     |
| 3~ NEOPULSE 500 G     | 440 A           | -                       | ✓                            | ✓                     |
| <b>TIG</b>            |                 |                         |                              |                       |
| 1~ TITAN 231 DC FV    | 200 A           | -                       | ✓                            | ✓                     |
| 3~ TITAN 321 DC       | 260 A           | -                       | ✓                            | ✓                     |
| 3~ TITAN 400 DC       | 360 A           | -                       | ✓                            | ✓                     |
| 1~ TITANIUM 230 AC/DC | 160 A           | -                       | -                            | ✓                     |
| 3~ TITANIUM 400 AC/DC | 360 A           | -                       | ✓                            | ✓                     |
| <b>TIG orbital</b>    |                 |                         |                              |                       |
| 1~ ORBITIG            | 140 A           | -                       | Integrated CANopen           |                       |

## 3 robotic wire-feed reels



Further information

|                                                                                                                                                                                                  | SMARTFEED<br>M-4 | SMARTFEED<br>MB-PP |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------|
|  <b>Ultra-lightweight</b><br>Only 4.5 kg to be fixed onto the robot<br>Only 4.9 kg to be fixed onto the robot | ✓                | ✓                  |
|  <b>Collision and wire-end sensor connections</b>                                                             | ✓                | ✓                  |
|  High vibration resistance                                                                                    | ✓                | ✓                  |
|  <b>4 manual controls:</b> Wire feed, wire retraction, purge and deslagging                                   | ✓                | ✓                  |
|  DC engine - 48 V • 25 m/min<br>Swiss-made                                                                    | ✓                | -                  |
|  BRUSHLESS engine • 25 m/min<br>Swiss-made                                                                   | -                | ✓                  |
|  EURO torch connector<br>Push Pull Torch Compatibility                                                      | ✓                | ✓                  |

See torch compatibility, page 20.

## Possibility of 2 MIG wirefeeders

GYS offers a choice of 3 external MIG wirefeeders:



**SMARTFEED M-4**  
Robotic wirefeeder  
Standard



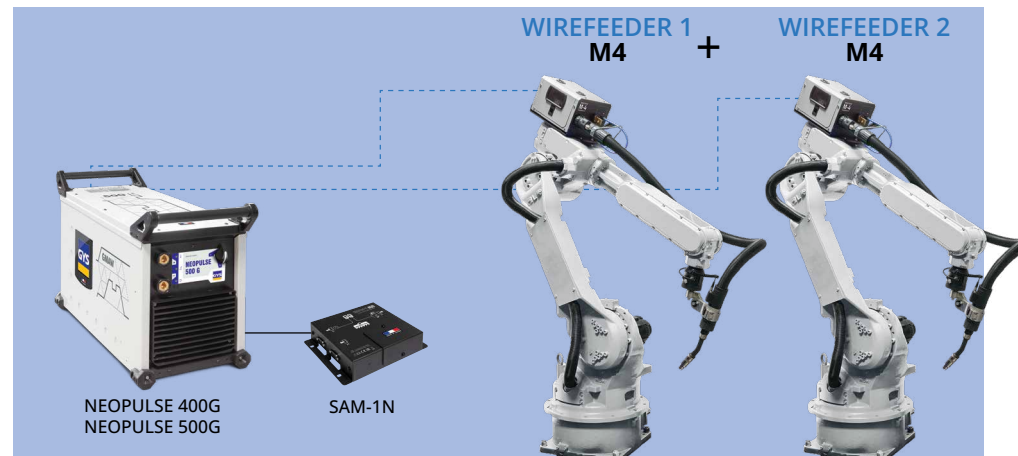
**SMARTFEED MB-PP**  
Robotic wirefeeder  
Push-Pull



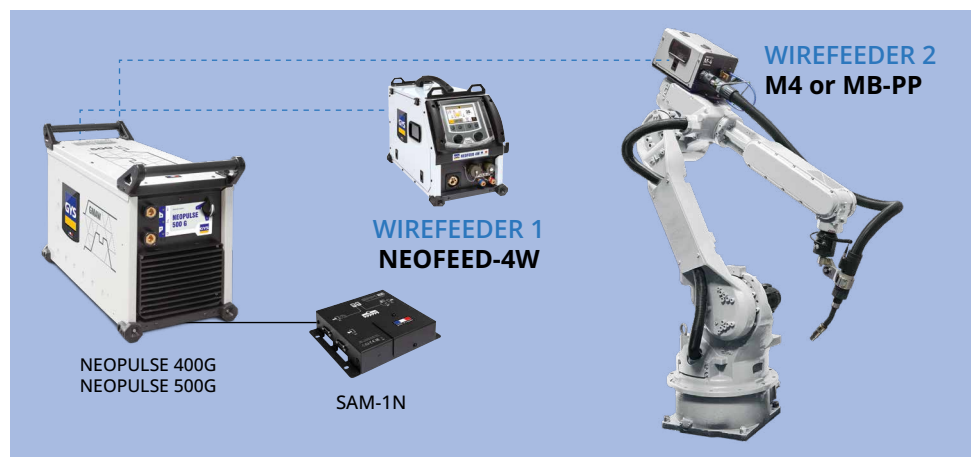
**NEOFEED-4W**  
Manual wirefeeder  
Standard

- + The settings on the two wirefeeders **can be different**
- + **Only 1 variable** to switch from one wirefeeder to another (N°\_Wirefeed = 1 or 2)
- ⚠ Only one wirefeeder at a time can be used for welding.

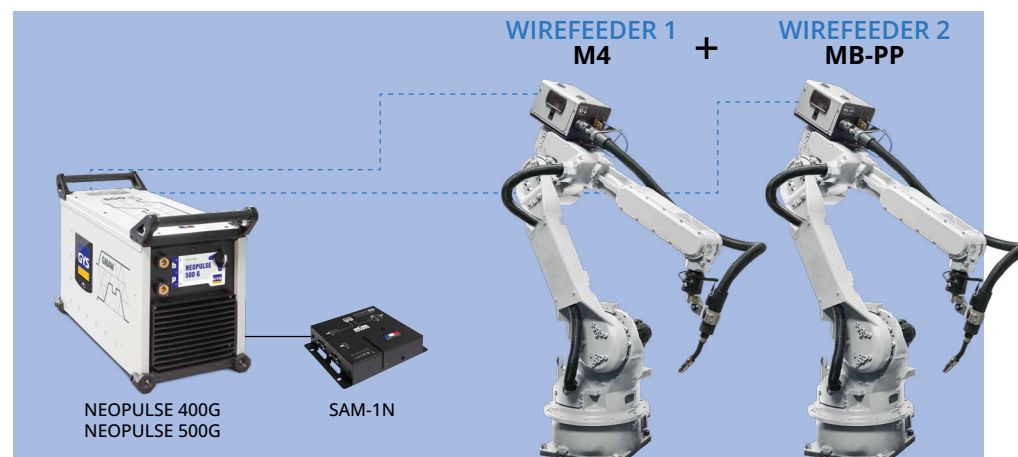
### EXAMPLE 1 - 2x SMARTFEED M4



### EXAMPLE 2 - 1x NEOFEED-4W + 1x SMARTFEED of your choice (M4 or MB-PP)



### EXAMPLE 3 - 1x SMARTFEED M4 + 1x SMARTFEED MB-PP



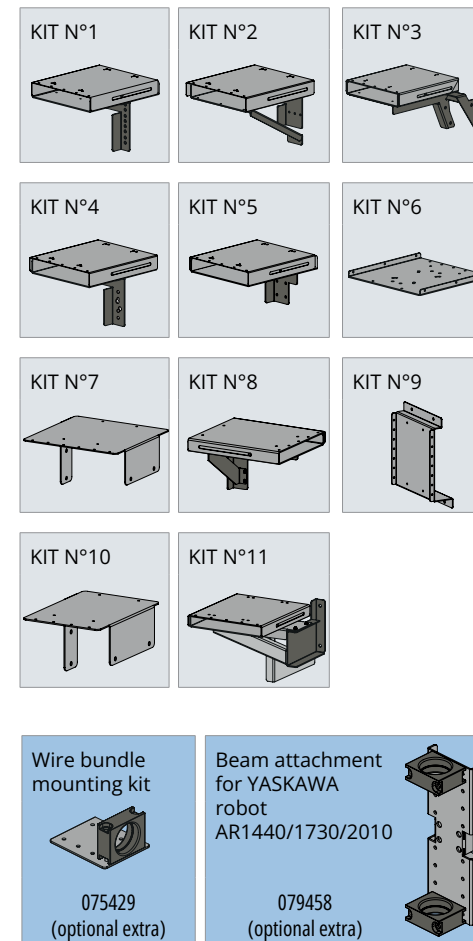
# Mounting kits for robot arms

Updated: 19/06/2024



| Robot          |                    | Mounting kit |             |
|----------------|--------------------|--------------|-------------|
| Brand          | Part number        | Name         | Part number |
| <b>ABB</b>     | IRB 1520ID         | KIT N°8      | 075399      |
|                | IRB 1660ID         | KIT N°3      | 071452      |
|                | IRB 2600           | KIT N°10     | 078772      |
|                | IRB 2600ID         | KIT N°11     | 078789      |
|                | IRB 4600           | KIT N°7      | 072602      |
|                | IRB 6600           | KIT N°9      | 075931      |
| <b>FANUC</b>   | ARC MATE 100i      | KIT N°6      | 072282      |
|                | ARC MATE 100iD     | KIT N°4      | 071469      |
|                | ARC MATE 100iD/8L  | KIT N°4      | 071469      |
|                | ARC MATE 100iD/10L | KIT N°4      | 071469      |
|                | ARC MATE 120iD     | KIT N°4      | 071469      |
|                | ARC MATE 120iD/12L | KIT N°4      | 071469      |
|                | ARC MATE 120iD/35  | KIT N°4      | 071469      |
|                | M-10iD             | KIT N°4      | 071469      |
|                | M-10iD/10L         | KIT N°4      | 071469      |
|                | M-10iD/8L          | KIT N°4      | 071469      |
|                | M-20iA/20M         | KIT N°6      | 072282      |
|                | M-20iA/20MT        | KIT N°6      | 072282      |
|                | M-20iA/35M         | KIT N°6      | 072282      |
|                | M-20iA/35MT        | KIT N°6      | 072282      |
|                | M-20iD             | KIT N°4      | 071469      |
|                | M-20iD/12L         | KIT N°4      | 071469      |
|                | M-20iD/35          | KIT N°4      | 071469      |
| <b>HYUNDAI</b> | HA006B             | KIT N°6      | 072282      |
|                | HA006L             | KIT N°6      | 072282      |
|                | HH010L             | KIT N°6      | 072282      |
|                | HH020              | KIT N°6      | 072282      |

| Robot           |                   | Mounting kit |             |
|-----------------|-------------------|--------------|-------------|
| Brand           | Part number       | Name         | Part number |
| <b>Kawasaki</b> | BA006N            | KIT N°2      | 071445      |
|                 | BA006L            | KIT N°2      | 071445      |
|                 | RA006L            | KIT N°6      | 072282      |
|                 | RA010L            | KIT N°6      | 072282      |
|                 | RA010N            | KIT N°6      | 072282      |
|                 | RA020N            | KIT N°6      | 072282      |
| <b>KUKA</b>     | KR 6 R1840 arc HW | KIT N°5      | 071476      |
|                 | KR 8 R1440 arc HW | KIT N°5      | 071476      |
|                 | KR 8 R1620 arc HW | KIT N°5      | 071476      |
|                 | KR 8 R1640 arc HW | KIT N°5      | 071476      |
|                 | KR 6 R1840-2      | KIT N°6      | 072282      |
|                 | KR 8 R1640-2      | KIT N°6      | 072282      |
|                 | KR 10 R1440-2     | KIT N°6      | 072282      |
|                 | KR 8 R2010-2      | KIT N°6      | 072282      |
|                 | KR 12 R1810-2     | KIT N°6      | 072282      |
|                 | KR 16 R1610-2     | KIT N°6      | 072282      |
|                 | KR 16 R2010-2     | KIT N°6      | 072282      |
|                 | KR 20 R1810-2     | KIT N°6      | 072282      |
|                 | KR 22 R1610-2     | KIT N°6      | 072282      |
| <b>YASKAWA</b>  | AR1440            | KIT N°1      | 070707      |
|                 | AR1730            | KIT N°1      | 070707      |
|                 | AR2010            | KIT N°1      | 070707      |
|                 | AR3120            | -            | on request  |
|                 | AH24-A10          | KIT N°1      | 070707      |
|                 | GP25-12           | KIT N°1      | 070707      |
|                 | MH6               | KIT N°6      | 072282      |



For all other questions,  
please [do not hesitate to contact us.](#)

## Options for robot



### 1 [075429](#)

#### Wire bundle mounting kit

Compatible with all wire-feed reel mounting kits.



### 2 Robotic circuit group

[073517](#) Liquid - 4 m - Ø 95 mm<sup>2</sup>

[069725](#) Liquid - 8 m - Ø 95 mm<sup>2</sup>

[078581](#) Liquid - 12 m - Ø 95 mm<sup>2</sup>

[085619](#) Liquid - 16 m - Ø 95 mm<sup>2</sup>

[073524](#) Control cable - 4 m

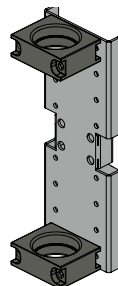
[073531](#) Control cable - 8 m



### 3 [077324](#)

#### Robotic connection cable

Allows to fix and guide the robotic beam along the robots.



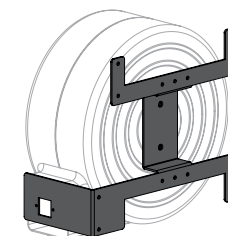
### 4 [079458](#)

**Beam attachment** dedicated to the YASKAWA robot (AR1440/1730/2010).



### [079793](#)

#### Robotic wire box



### [079809](#)

#### Robotic wire box holder



5 Adjustable wirefeeder position to adjust the length of the torch.

## Robot welding torches



GYS does not stock any robot welding torches as the decision depends mainly on the brand and type of robot arm used.



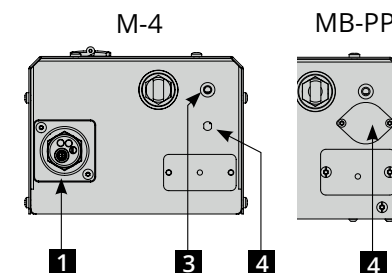
GYS recommends the following robot welding torch manufacturers:



### Choosing a robot welding torch

SMARTFEED wirefeeders and our generators require a compatible torch according to 4 essential criteria:

- 1** EURO-type power connection
- 2** Female coolant connection (standard type)
- 3** Air-tube connection (Ø 8 mm)
- 4** M-4: M8 anti-collision connector (three-pin female) (connector supplied)
- 4** MB-PP: Collision information connected in the 24-pin connector (connector supplied)

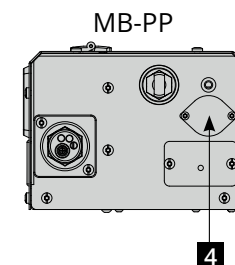


### Choosing a Push-Pull Robotic Torch

- 4** 24pts connector for DC push-pull and BRUSHLESS torch control (connector supplied with the wirefeeder)

#### Compatible Push-Pull torches:

- Push-Pull torch with DC 42V motor, without encoder, BINZEL reference WH PP.
- Push-Pull torch with BRUSHLESS motor, BINZEL reference MPP OA PUSH PULL.



## Cobot manual torch support



Further information

### Cobot manual torch support (ISO 9409-1\_50\_4\_M6)

The cobot manual torch support is designed to accommodate air- or liquid-cooled MIG welding torches with an external wire bundle, made by Binzel® MB36 / M501.



Setting up the torch is simple, quick and tool-free.



Compatible with the majority of cobot arms on the market  
ABB / Dobot / Doosan / Fanuc / Hanwha / Jaka / Kassow / Omron / Techman / Universal Robot



180° rotatable torch



Two compatible torches available directly from GYS

MIG/MAG GRIP 350 A steel (4 m, air cooled)  
Original equipment: 1.2 (steel)

040946

MIG/MAG GRIP 500 A steel (4 m, liquid cooled)  
Original equipment: 1.2 (steel)

041004



Further information

### RC-HD2 digital remote control

The welding machine's settings can be controlled and adjusted directly from the digital control panel.



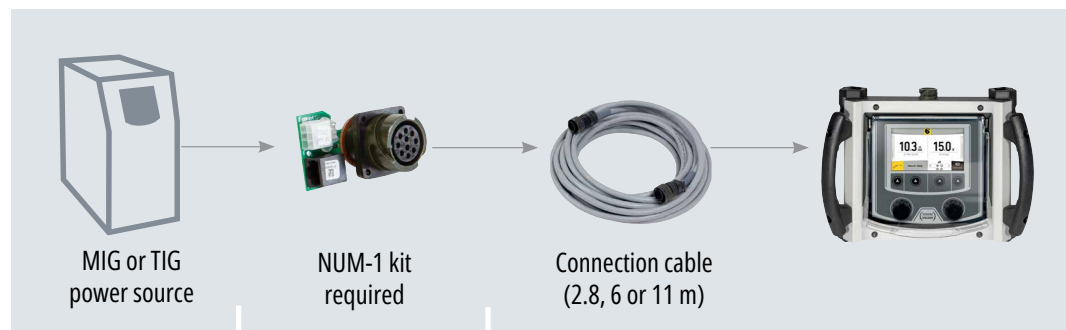
Compatible with our entire NEOPULSE / TITANIUM / TITAN



Connection cable up to 11 m (optional extra)



Plug and Play, the interface is automatically detected and updated



 Inside the device



## 3 automation platforms

**C5**

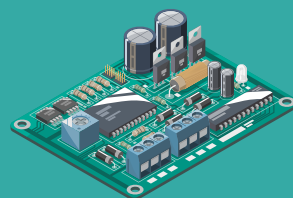
**Connect-5**

**Inside** the product

**5** JOB

**Manual** command from distance

All or nothing communication  
between  
the Connect-5 and the operator



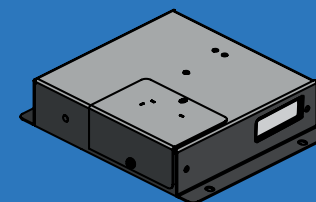
**SAM-1A**

**Inside** the product

**20** JOB

**Mechanization**

All or nothing communication  
between  
the control unit and the SAM-1A



**SAM-1N**

**Outside** of the product

Up to **500** JOB

**Advanced automation**

Communication through  
**6 industrial protocols**

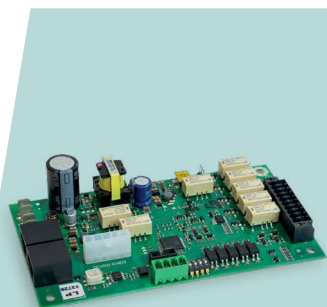
## 2 SAM welding platforms: Digital/Analogue and Numerical

GYS solutions are compatible with two different types of automation:

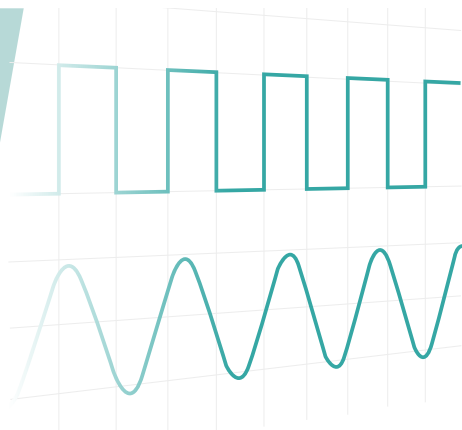
### Non-Numerical connexion

Those with **digital and analogue inputs/outputs** for small or old installations and basic automations.

↳ **Platform required: SAM-1A** (see page 25)



SAM-1A



Digital/Analogue

### Numerical connexion

For **controller with one of the following 6 master industrial-communication protocols**: EtherNET/IP, ProfiNET, Modbus TCP, EtherCAT, DeviceNET and CANopen.

↳ **Platform required: SAM-1N** (see page 26)

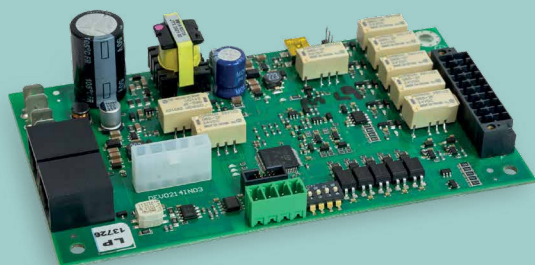


SAM-1N



Numerical

## Digital/Analogue SAM Overview



Further information

### SAM-1A communication interface (Digital/Analogue)

The SAM-1A module converts the internal communication language of GYS machines into both digital and analogue input/output signals.



Digital: up to four inputs and five outputs  
Analogue (0 - 10 V): up to four inputs and two outputs



Built-in SAFETY feature



3 available modes:

- MIG: JOB (20) and MANUAL mode
- TIG: JOB (20) and TRACKING mode
- Exagon: CV



SAM-1A card

 Inside the device



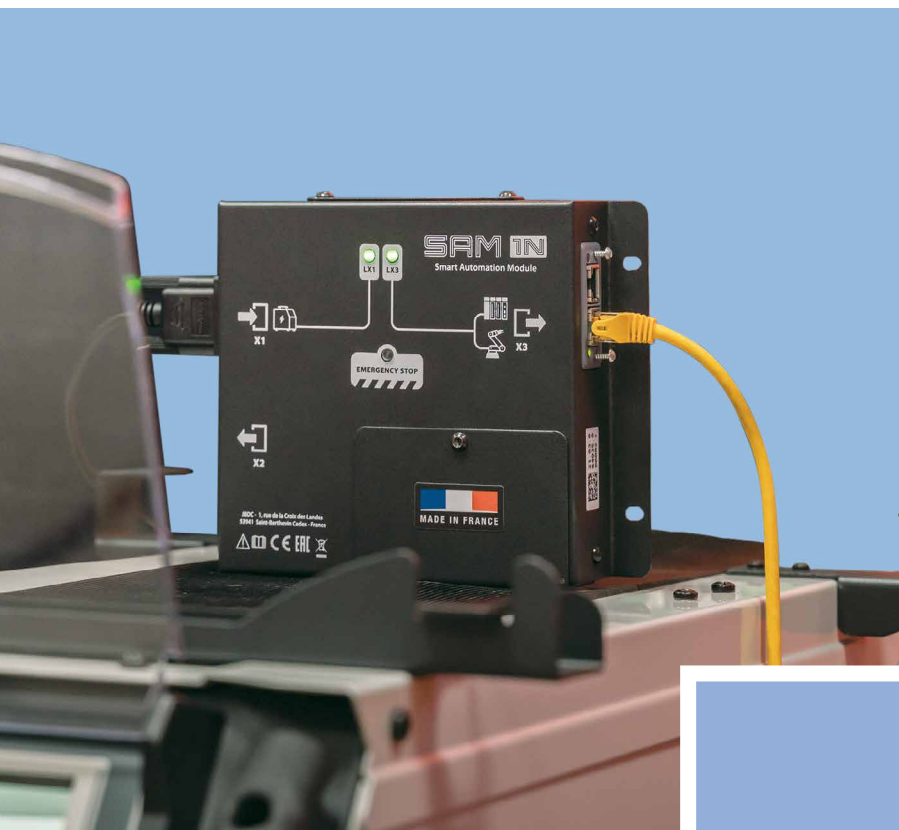
Connectors

 Inside the device



Multiple projects

## Numerical SAM Overview



Further information

### SAM-1N communication interface (Numerical)

The SAM-1N module is a numerical communication solution between GYS' automatable devices and the majority of robots, cobots and PLCs on the market.



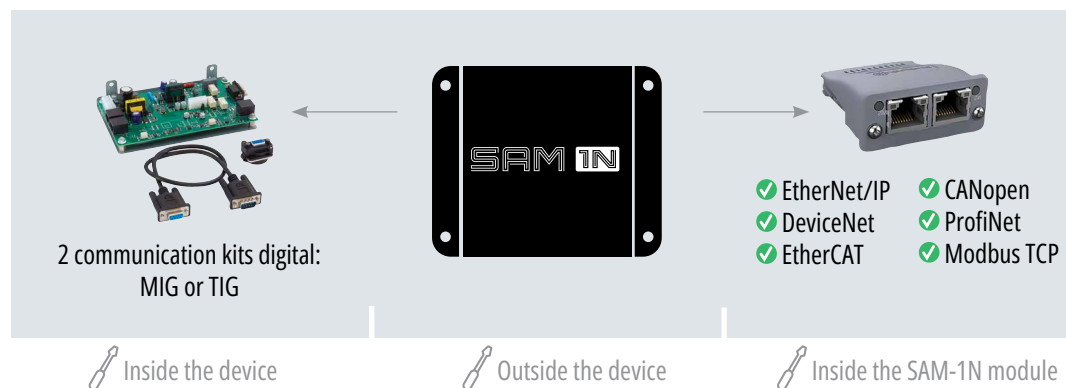
90% of PLCs/cobots are compatible



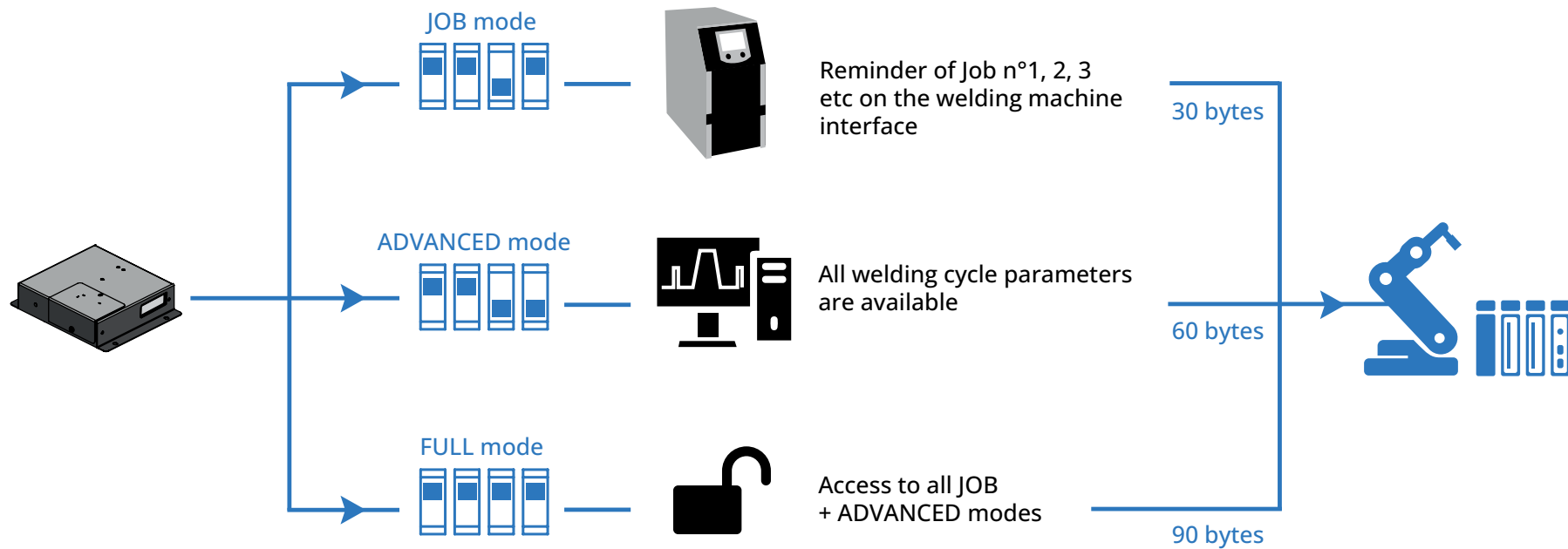
6 communication protocols available



Plug and play: automatically detects connected devices



## 3 ways to access the settings



## Robot Compatibility



GYS solutions are compatible with all major robot brands:



COMAU



| Robot brand | Controller                                      | Communication protocol | MIG | AC TIG | DC TIG |
|-------------|-------------------------------------------------|------------------------|-----|--------|--------|
| ABB         | Omnicores                                       | EtherNet/IP            | ✓   | ✓      | ✓      |
|             |                                                 | ProfiNet               | ✓   | ✓      | ✓      |
|             | IRC5 single / IRC5 Compact / IRC5 Panel Mounted | EtherNet/IP            | ✓   | ✓      | ✓      |
|             |                                                 | ProfiNet               | ✓   | ✓      | ✓      |
|             |                                                 | DeviceNet              | ✓   | ✓      | ✓      |
| FANUC       | R30iB +/R30iB + mini/ R30iB + mate              | EtherNet/IP            | ✓   | ✓      | ✓      |
|             |                                                 | ProfiNet               |     |        |        |
|             |                                                 | DeviceNet              | ✓   | ✓      | ✓      |
| HYUNDAI     | Hi5a-S20                                        | Ethernet IP            |     |        |        |
|             |                                                 | Profinet               |     |        |        |
|             |                                                 | Devicenet              | ✓   | ✓      | ✓      |
| KAWASAKI    | E controller                                    | EtherNet/IP            | ✓   | ✓      | ✓      |
| KUKA        | KRC5                                            | EtherNet/IP            | ✓   | ✓      | ✓      |
|             |                                                 | EtherCAT               | ✓   | ✓      | ✓      |
|             |                                                 | ProfiNet               | ✓   | ✓      | ✓      |
|             | KRC4/KRC4 Compact                               | EtherCAT               | ✓   | ✓      | ✓      |
|             |                                                 | ProfiNet               | ✓   | ✓      | ✓      |
|             |                                                 | EtherNet/IP            |     |        |        |

| Robot brand | Controller | Communication protocol | MIG | AC TIG | DC TIG |
|-------------|------------|------------------------|-----|--------|--------|
| Stäubli     | CS9        | EtherCAT               | ✓   | ✓      | ✓      |
|             |            | Modbus TCP             | ✓   | ✓      | ✓      |
|             |            | EtherNet/IP            | ✓   | ✓      | ✓      |
|             |            | ProfiNet               |     |        |        |
| YASKAWA     | YRC1000    | EtherNet/IP            | ✓   | ✓      | ✓      |
|             |            | ProfiNet               | ✓   | ✓      | ✓      |
|             |            | DeviceNet              | ✓   | ✓      | ✓      |
|             | DX200      | EtherNet/IP            | ✓   | ✓      | ✓      |
|             |            | DeviceNet              | ✓   | ✓      | ✓      |
|             | DX100      | EtherNet/IP            | ✓   | ✓      | ✓      |
|             |            | DeviceNet              | ✓   | ✓      | ✓      |

Updated: 24/01/2024

## Cobot Compatibility



GYS solutions are compatible with all major cobot brands:



DOBOT

DOOSAN

FANUC



Hanwha

JAKA

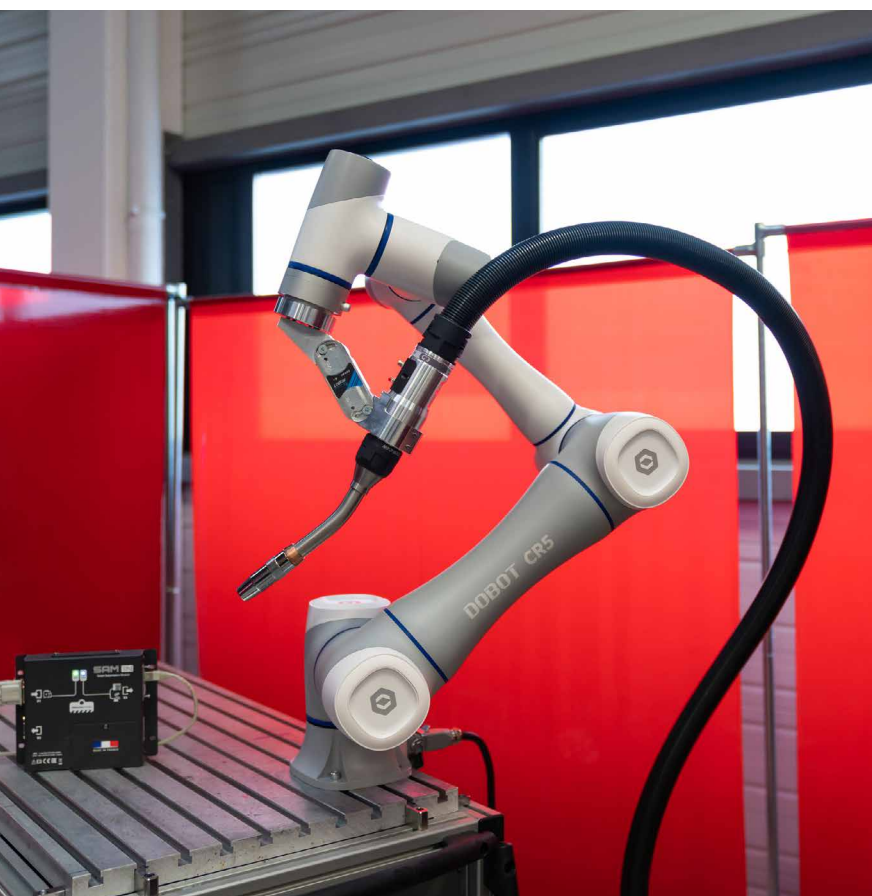
KASSOW robots

OMRON

TECHMAN ROBOT



YASKAWA



| Cobot brand         | Controller                  | Digital / Analogue |        | SAM-1N - Numerical |     |        |        |
|---------------------|-----------------------------|--------------------|--------|--------------------|-----|--------|--------|
|                     |                             | Plasma             | SAM-1A | Protocole          | MIG | TIG AC | TIG DC |
| ABB<br>GoFa         | Omnicores                   | ✓                  | ✓      | EtherNet/IP        | ✓   | ✓      | ✓      |
| Dobot               | CR Serie                    | ✓                  | ✓      | ProfiNet           | ✓   | ✓      | ✓      |
| Doosan              | M_Serie/H_Serie/<br>A_Serie | ✓                  | ✓      | Modbus TCP         | ✓   | ✓      | ✓      |
| FANUC<br>CR serie   | R30iB Mini Plus             | ✓                  | ✓      | Modbus TCP         | ✓   | ✓      | ✓      |
| Hanwha              | HCR                         |                    |        | EtherNet/IP        | ✓   | ✓      | ✓      |
| JAKA                | ZU/ZU_*s/ZU_Ai              |                    |        | ProfiNet           |     |        |        |
| KASSOW              | KR Serie                    | ✓                  | ✓      | DeviceNet          | ✓   | ✓      | ✓      |
| OMRON               | TM                          |                    |        | Modbus TCP         | ✓   | ✓      | ✓      |
| TECHMAN             | TM                          |                    |        | Modbus TCP         | ✓   | ✓      | ✓      |
| UNIVERSAL<br>ROBOTS | E serie / CB3               | ✓                  | ✓      | Modbus TCP         | ✓   | ✓      | ✓      |
| YASKAWA<br>HC serie | YRC1000                     | ✓                  | ✓      | Modbus TCP         | ✓   | ✓      | ✓      |
|                     |                             |                    |        | EtherNet/IP        | ✓   | ✓      | ✓      |
|                     |                             |                    |        | DeviceNet          | ✓   | ✓      | ✓      |

*[Please contact us](#) for any further information*

## PLC Compatibility



GYS solutions are compatible with all major PLC brands:



| PLC brand                  | Communication protocol                                                    |
|----------------------------|---------------------------------------------------------------------------|
| <b>BECKHOFF</b>            | EtherNet/IP<br>ProfiNet<br>Modbus TCP<br>EtherCAT<br>DeviceNet<br>CANopen |
| <b>DELTA</b>               |                                                                           |
| <b>OMRON</b>               |                                                                           |
| <b>Pro-face</b>            |                                                                           |
| <b>Rockwell Automation</b> |                                                                           |
| <b>Schneider Electric</b>  |                                                                           |
| <b>SIEMENS</b>             |                                                                           |
| <b>UNITRONICS</b>          |                                                                           |
| <b>WAGO</b>                |                                                                           |

## Special Application Software

The major robot and cobot brands offer software suites that need to be developed in partnership with the machine manufacturers' technical teams.

Here is the situation at GYS:

| Brand           | Application Software | Statut Front-End |      |
|-----------------|----------------------|------------------|------|
|                 |                      | MIG              | TIG  |
| ABB             | Wizard               | 100%             | 100% |
|                 | WebApps              |                  |      |
|                 | RobotWare Arc        | 100%             | 75%  |
| FANUC           | ArcTool              | 100%             | 100% |
| KASSOW          | Cbun X               | 50%              |      |
| KAWASAKI        | Welding Software     | 100%             | 0%   |
| KUKA            | ArcTech              | 50%              |      |
| UNIVERSAL ROBOT | URCap                | 100%             | 50%  |



Update: 30/04/2024

## ABB - Application software



 Omnicore

### Program blocks

GYS offers several ABB programming blocks to simplify the use of GYS generators with compatible ABB robots/cobots.



Downloadable from the GYS configurator using the Front-End button at the bottom of the page.



Simplified programming, using GYS blocks does not require in-depth knowledge of the parameters.



Can be used in Wizard programming on Omnicore.

WebApps developed by GYS simplify the setting and use of GYS generators directly from the robot teach pendant. Visualisation is clear and easy.

 Omnicore





#### Cbun Software - KASSOW

The Cbun software developed by GYS simplifies the communication process between GYS machines and KASSOW cobots. New MIG welding programs can be easily created using the software and allow applications to be started very quickly.



Simplified programming with a single block offering several options: MMI\_Lock/Unlock - Start/Stop welding/ Linear welding/...



No programming skills are required to use the Cbun software. Recall JOB mode from the cobot

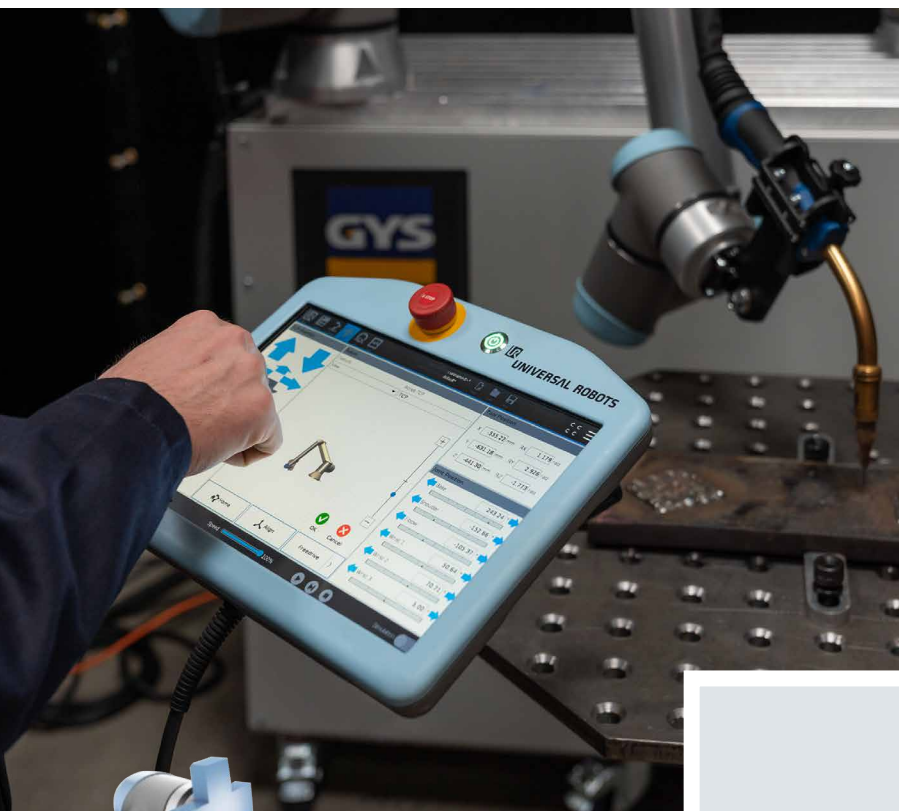


Reproducible and accurate



Compatible with our entire range of NEOPULSE welding machines (MIG welding)

## UR Application Software



**UNIVERSAL ROBOTS+**  
Certified

Further information

### URCap Software - Universal Robots

The URCap software developed by GYS simplifies the communication process between GYS machines and Universal Robots. New welding programs can be easily created using the software and allow applications to be started very quickly.



Simplified programming in just three steps:

**1** Starting position **2** Welding **3** Removal position



No programming skills are required to use the URCap software. Recall JOB mode from the cobot



Reproducible and accurate



Compatible with our entire range of NEOPULSE welding machines

#### URCap MIG

☒ Released

#### URCap TIG



Q2 2024

#### URCaps Plasma



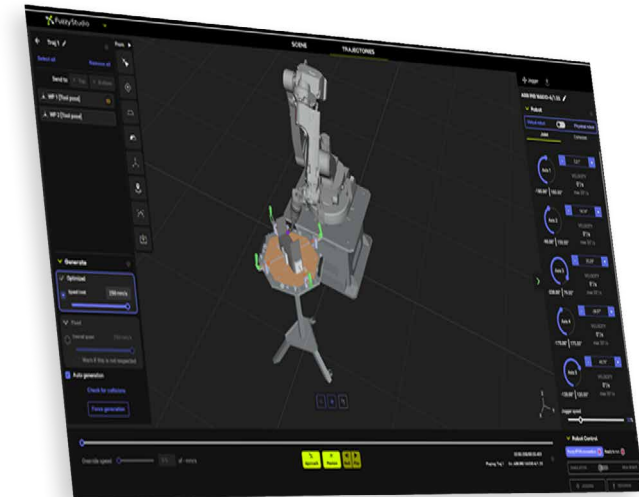
Q3 2024

### Compatible simulation software



#### CENIT - FASTSUITE

- No need to know robot's programming standard.
- **No code simulation** and programming software.
- Compatible with **many robot brands**.
- All programming can be done away from the robot through a 3D simulation of the cell.
- The program made by clicking on the piece to weld is translated into the needed robot language and can be loaded and run.
- No direct link between the 3D software and the actual cell.



#### FUZZY LOGIC - FUZZY STUDIO

- **No code simulation** and programming software.
- No need to know robot's programming standard.
- Compatible with **many robot brands**.
- All programming can be done away from the robot through a 3D simulation of the cell.
- The program made by clicking on the piece to weld is translated into the needed robot language and can be loaded and run.
- Possible to connect the robot to control it from the 3D simulation software.
- Possible to control the cell's I/O through MQTT messaging.

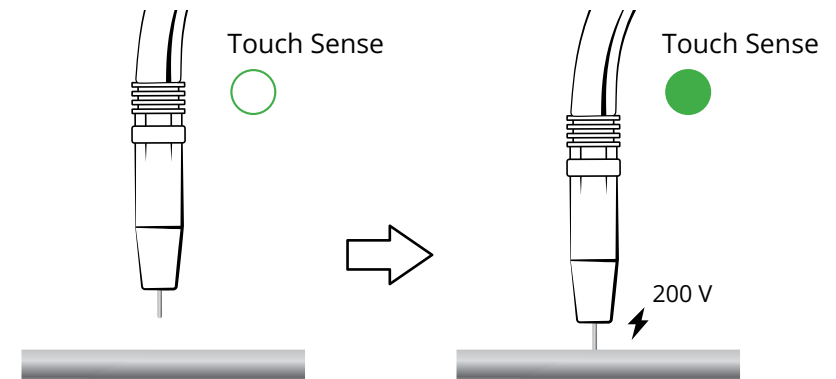
## Touch

The touch function is used to detect the workpiece by means of the welding wire (in MIG) or the electrode (in TIG).

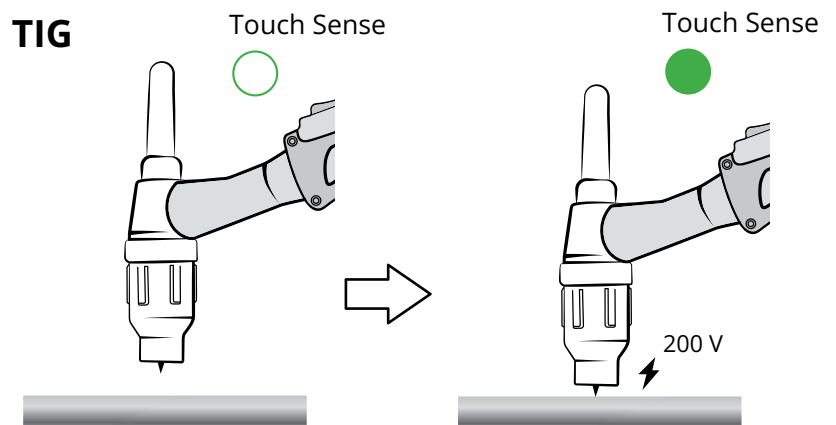
When the touch function is enabled, electrical pulses are sent through the electrode/wire.

Once in contact with the workpiece, the Touch\_Sense variable switches to 1. This allows functions such as relocation, path correction, workpiece presence control, etc. to be programmed.

### MIG



### TIG



— Position search  
— Touch Sense



5

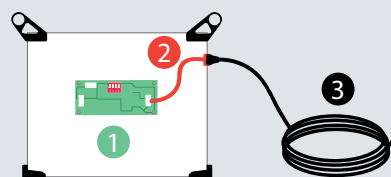
# PLASMA CUTTER





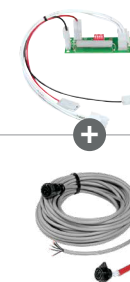
| Products         | 100% duty cycle | Max. cut | Cut clean | Marking mode | CNC-1 kit<br>Digital/<br>Analogue | CNC-2 kit<br>Digital/<br>Analogue<br>+ RS485 |
|------------------|-----------------|----------|-----------|--------------|-----------------------------------|----------------------------------------------|
| <b>CUTTER CT</b> |                 |          |           |              |                                   |                                              |
| 1~ CUTTER 45 CT  | 32 A            | 30 mm    | 25 mm     | -            | ✓                                 | -                                            |
| 3~ CUTTER 70 CT  | 55 A            | 35 mm    | 25 mm     | -            | ✓                                 | -                                            |
| <b>NEOCUT</b>    |                 |          |           |              |                                   |                                              |
| 3~ NEOCUT 105    | 105 A           | 50 mm    | 35 mm     | ✓            | ✓                                 | ✓                                            |
| 3~ NEOCUT 125    | 125 A           | 57 mm    | 40 mm     | ✓            | ✓                                 | ✓                                            |

### Contents of the CNC-1 and CNC-2 kits



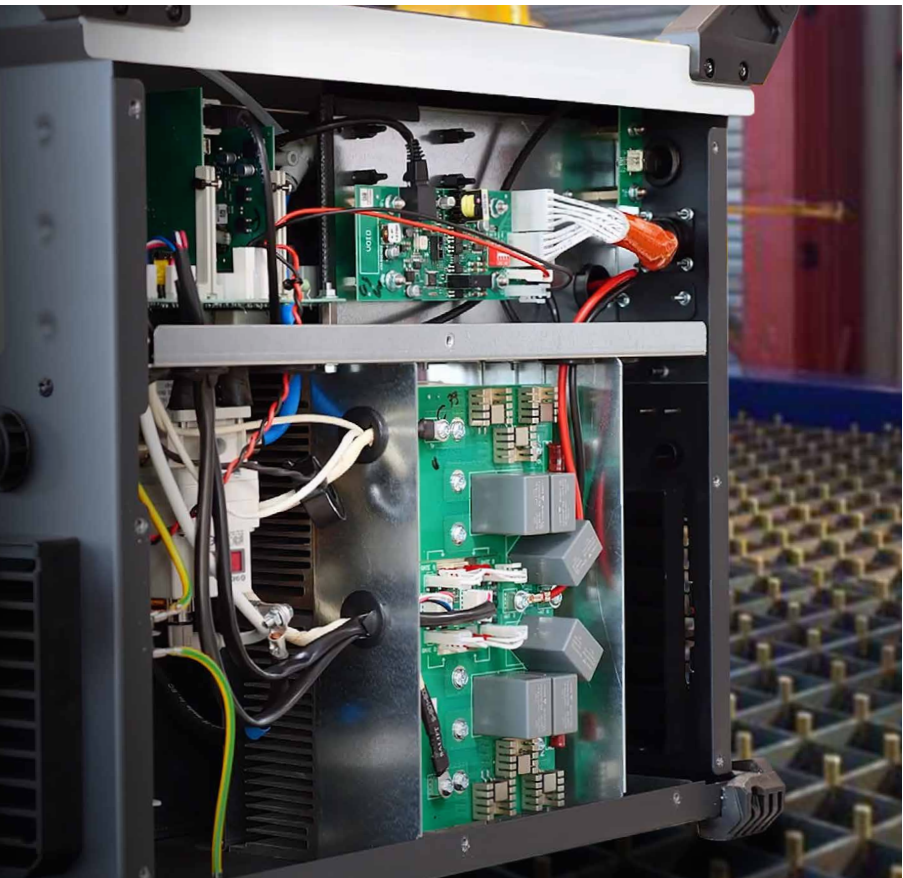
- 1 Interfacing card
- 2 Internal connection
- 3 External connection (15 m, can be cut as required)

### CNC-1 kit



### CNC-2 kit





Analogue and digital linking kit

2 two kits have been designed to guarantee the connection and exchange of information between GYS plasma cutters and the cutting tables' digital control system.

| Signal                     | <div>Cutter plasma</div> <div>CNC</div> | CNC-1 | CNC-2 |                  |
|----------------------------|-----------------------------------------|-------|-------|------------------|
| Start/stop cutting         | ←→                                      | ✓     | ✓     | Digital Analogue |
| Transfer OK                | →                                       | ✓     | ✓     |                  |
| Divided arc voltage        | →                                       | ✓     | ✓     |                  |
| Marking (NEOCUT only)      | ←                                       | ✓     | ✓     |                  |
| Adjusting the current      | ←                                       |       | ✓     | RS485            |
| Adjusting the air pressure | ←                                       |       | ✓     |                  |
| Choosing a cutting mode    | ←                                       |       | ✓     |                  |
| Remote diagnostics         | ←                                       |       | ✓     |                  |

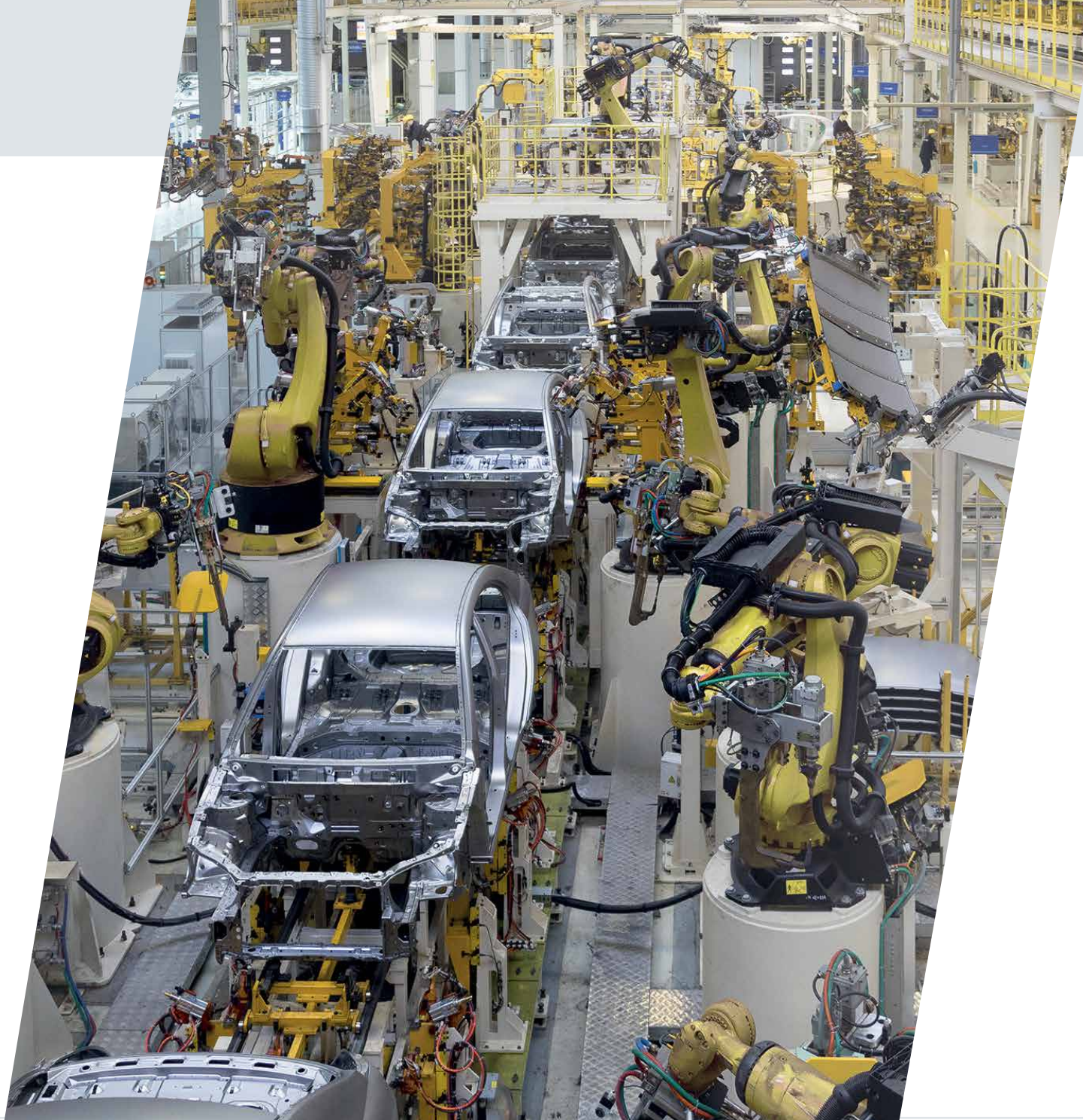
Sales brochure

Setup videos for CNC kits

User manuals (PDF)

6

# CHARGE HOLDING



Battery chargers



GYS' battery chargers are designed for industrial applications, particularly in the automotive sector. They are used for charging batteries and regulating a stabilised power supply.



| Products                  | V    | Charging current | Charge capacity | Type of batteries         | Bang-bang control |
|---------------------------|------|------------------|-----------------|---------------------------|-------------------|
| Chargeurs                 |      |                  |                 |                           |                   |
| 1~ GYSFLASH 148.12 CNT FV | 12 V | 145 A            | 1800 Ah         | Lead                      | ✓                 |
| 3~ GYSFLASH 158.12 CNT FV |      | 150 A            |                 | LFP<br>Li-ion<br>Traction | ✓                 |

Communication accessories:



Accessoires HUB :



Further information



[www.gys.fr](http://www.gys.fr)



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