





Robotic Interface II™

Interfaces Miller Power Sources with Commercially Available Robots



Processes

-  **MIG (GMAW) Welding**
-  Pulsed MIG (GMAW-P) Welding
-  Adaptive Pulsed MIG (GMAW-P) Welding
-  Flux Cored (FCAW) Welding



The Robotic Interface II™ is designed to put versatility to work by interfacing the quality of Miller welding power sources with most commercially available robots.

Designed to work with Miller Deltaweld® 452 and Invision™ 456, the Robotic Interface II can change parameters in the middle of a weld, to provide the appropriate arc characteristics for the application.

Now, with Robotic Interface II, your existing robots needn't settle for anything less than the full strength and reliability of Miller power sources.



Robotic Interface II comes complete with interface console, wire feeder with gas valve, mounting plate, cables for connection to the power source, a volt-sensing cable, and a factory-installed receptacle kit (available for most major robot brands).

Applications

- Fabrication
- Automotive
- Construction
- Lawn and garden
- Farm equipment
- Metal furniture
- Recreational vehicles

Features

Benefits

Arc monitor	Shuts the system down if voltage falls outside user-defined values.
Arc time counter	Keeps track of arc time and weld cycles.
Process control	Single panel can do MIG, pulsed MIG and adaptive pulsed MIG, with no need for an additional panel.
Preprogrammed synergic pulse programs	Includes eight preprogrammed synergic pulse programs for fast start-up in typical pulse applications.
Customized programs	Programs can be easily customized to satisfy specific application requirements.
Stored programs	The eight programs can also be used to store multiple MIG programs when used with Deltaweld.
Optional data card	Allows copying customized programs to other Robotic Interface II, Robotic Interface II with Fiber Optic Link™, Automatic M™ or 64M feeders, or use for security to protect programs/processes.
Ease of set up	Easy to set up and program via buttons and LCD display.
Analog display	Wire feed speed, trim and voltage can be read from a distance and are communicated by analog signals with robot.
Remote program select	Allows changing program from the robot controller/teach pendant.
Error messages and LED indicators	Facilitate troubleshooting and getting back on-line.
E-stop interface to robot	E-stops welding with signal from robot.
Factory installation of receptacle kits	To further facilitate installation and start-up.

Robotic Interface II Console Specifications *(Subject to change without notice.)*

Input Power	Welding Power Source Type	Welding Processes	Dimensions
From power source: single-phase, 115 VAC, 5 amps, 50/60 Hz	CV DC with contactor and 14-pin remote control for MIG or Flux Cored CV/CC inverter with contactor and 17-pin remote control for pulsed MIG	MIG, pulsed MIG, and Flux Cored	H: 10 in (254 mm) W: 15-1/4 in (387 mm) D: 21-3/4 in (552 mm)

Wire Feeder Specifications *(Subject to change without notice.)*

Wire Feeder Speed Range	Wire Diameter Range	Dimensions	Weight
Standard: 50–780 IPM (1.3–19.8 MPM). (Speeds while using MIG. With pulsed MIG, speed ranges may be more limited.)	.030–.062 in (0.8–1.6 mm)	H: 8-1/2 in (216 mm) W: 10 in (254 mm) D: 12 in (305 mm)	75 lb (34 kg)

Ordering Information  See back page.



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System Components

Robotic Interface II

- Console
- Wire feeder with gas valve
- Ball socket and mounting plate for wire feeder
- 30 ft cable to wire feeder
- 10 ft, 14-pin cable to power source
- 10 ft, 17-pin cable for pulsing Invision™ 456 power source (not required for conventional MIG)
- 35 ft volt-sensing cable between workpiece and wire feeder

Receptacle Kit

- Receptacle panel with connectors
- Separate harness (to attach inside console)
- Extra cable for program select (if required by robot)
- Field instructions

Parameter Ranges

Minimum voltage:	0.0–25.0 V
Maximum voltage:	25.0–99.9 V
Minimum amperage:	0–50 amps
Maximum amperage:	50–999 amps
Inductance:	0.0–99%
Purge:	0.0–25.0 sec
Arc time:	0–9,999.99 hours, 0–999,999 cycles
Wire feed display:	IPM/MPM
Jog IPM:	50–780
Arc voltage error monitor:	0.1–9.9 V 0.1–25 sec

Capabilities

Software Features

- Programmable sequences
- Power source range
- System process type
- Arc timer/counter
- Arc monitor – on/off
- Pulse welding
- Arc outage detection – on/off
- Wire stick check
- Programmable error shutdown
- Security lockout
- Arc start hot/standard
- Remote parameter inc./dec. (±)
- Wire feed – std. (high/low future plan)
- Wire type – hard/soft wire
- Software version display
- Soft pulse arc
- Polarity sensor
- Arc current monitor
- Ground current sensor

Front Panel Features

- Wire retract/advance
- Purge
- Parameter select
- Error reset
- Display meter – digital voltage
- Display meter – digital IPM
- Display meter – ammeter
- Increase/decrease buttons
- Mode selector (functions like cursor)

Digital Inputs

- Start – maintained
- Jog forward
- Jog reverse
- Purge
- Preflow
- Program select 8 (3 bits)
- Error reset
- E-stop

Digital Outputs

- Arc on
- Wire stick
- Welder ready

Analog Inputs

- Voltage/trim
- Wire feed speed

Analog Outputs

- Voltage
- Current

Robot Type—Control of:

“PS, Wire, Gas & Analog”

The robot has control of arc on, the welding power source contactor, wire feed speed, gas valve and two analog channels.

With this control, only the start time, level and speed are programmable.

“Arc On No Analog Inputs”

The robot has control of arc on but the interface has control of weld sequences. There are no analog channels for the robot to use.

With this control, preflow; start time, level and speed; weld level and speed; crater time, level and speed; burnback time and level; and postflow are programmable.


“Arc On + Analog Inputs”

The robot has control of weld sequences. There are two analog channels for the robot to use.

With this control, preflow; start time, level and speed; burnback time and level; and postflow are programmable.

Drive Roll Kits (Order from Miller Service Parts.)

Select drive roll kits from chart below according to type and wire size being used. Drive roll kits include necessary guides and feature an anti-wear sleeve for the inlet guide.

Wire size	 “V” groove for hard wire	 “U” groove for soft wire or soft-shelled cored wires	 “V” knurled for hard-shelled cored wires
.030 in (0.8 mm)	#046 780	—	—
.035 in (0.9 mm)	#046 781	#044 750	#046 792
.045 in (1.1/1.2 mm)	#046 782	#046 785	#046 793
.052 in (1.3/1.4 mm)	#046 783	#046 786	#046 794
1/16 in (1.6 mm)	#046 784	#046 787	#046 795

Options (Order from Miller Service Parts.)

Data Card for Pulsed MIG Power Source
 XMT® 304 #043 390
 Blank data card #155 910

Quick-Change Four-Roll Conversion Kit
 #043 390

Adapter Cord, Automation to Invision
 #043 551

System Checklist and Quotation Sheet

Equipment	Stock No.	Description	Qty.	Price
Robotic Interface II w/Factory-Installed Receptacle Kit	#043 083-01-1	For ABB Robot		
	#043 083-01-2	For Babcock & Wilcox® Robot		
	#043 083-01-3	For Camau Robot		
	#043 083-01-4	For Fanuc Robot		
	#043 083-01-5	For Hitachi® Robot		
	#043 083-01-6	For Kawasaki Robot		
	#043 083-01-7	For Nachi Robot		
	#043 083-01-8	For Motorman Robot (Yasukawa)		
Individual Components				
Robotic Interface II	#043 083			
Receptacle Kits	#043 130	For ABB Robot		
	#043 601	For Babcock & Wilcox® Robot		
	#043 374	For Camau Robot		
	#043 131	For Fanuc Robot		
	#043 132	For Hitachi® Robot		
	#043 375	For Kawasaki Robot		
	#043 372	For Nachi Robot		
	#043 232	For Motorman Robot (Yasukawa)		
Drive Roll Kit		See table on page 3		
Options				
Data Card for Pulsed MIG Power Source	#043 390	For XMT® 304		
	#155 910	Blank data card		
Quick-Change Four-Roll Conversion Kit	#155 455	Order from Miller Service Parts		
Adapter Cord, Automation to Invision	#043 551	For pulse applications		
Date:			Total Quoted Price:	



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