

AR-P Series



The “AR-P Series” is a robot developed by HIRATA, a manufacture of production facilities.

Low price

- SCARA robot with good cost-performance by reviewing major parts
- Absolute encoder equipped
- Controller-integrated robot no longer requires relay cables

Easy installation

- Powerful support for system construction through off-line teaching and simulation by tools
Supports quick start-up with collision-avoidance and teaching-assistant functions

Long-term stable operation

- Realizes common operability with other HIRATA robots
- Significantly facilitates maintenance by integrating a controller



Model number / performance

< Example of model number >

A R - P 400 H

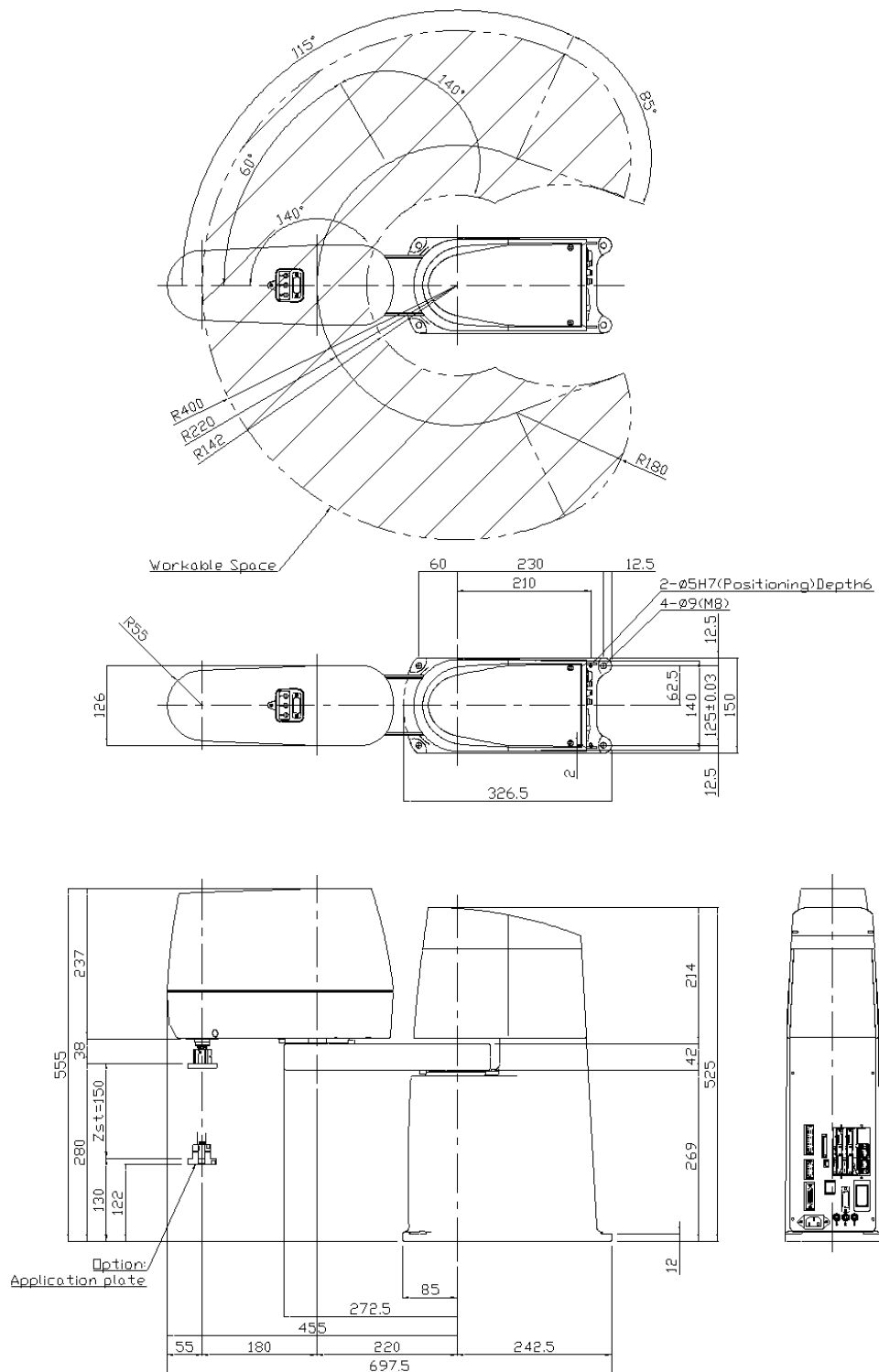
└─ Arm length

Model number		AR-P400H
Number of operation axes		4-axis
Position detecting method		Absolute
Arm length	Total length	400mm
	First arm	220mm
	Second arm	180mm
Operation area	A-axis	±115 deg
	B-axis	±140 deg
	Z-axis	150mm
	W-axis	±360 deg
Maximum speed	A&B-axes	3,072mm/s
	Z-axis	280mm/s
	W-axis	1,100 deg
Repeatability	A&B-axes	±0.03mm
	Z-axis	±0.02mm
	W-axis	±0.02 deg
Weight capacity	Rating	1.0kg
	Maximum	3.0Kg
Tip allowable moment		0.012kg · m ²
Application	Signal	15core×0.2mm ²
	Air	Φ4×3 lines
Total robot weight		27kg
Applicable controller		Integrated controller

Outside drawing

■ External dimensions and working area

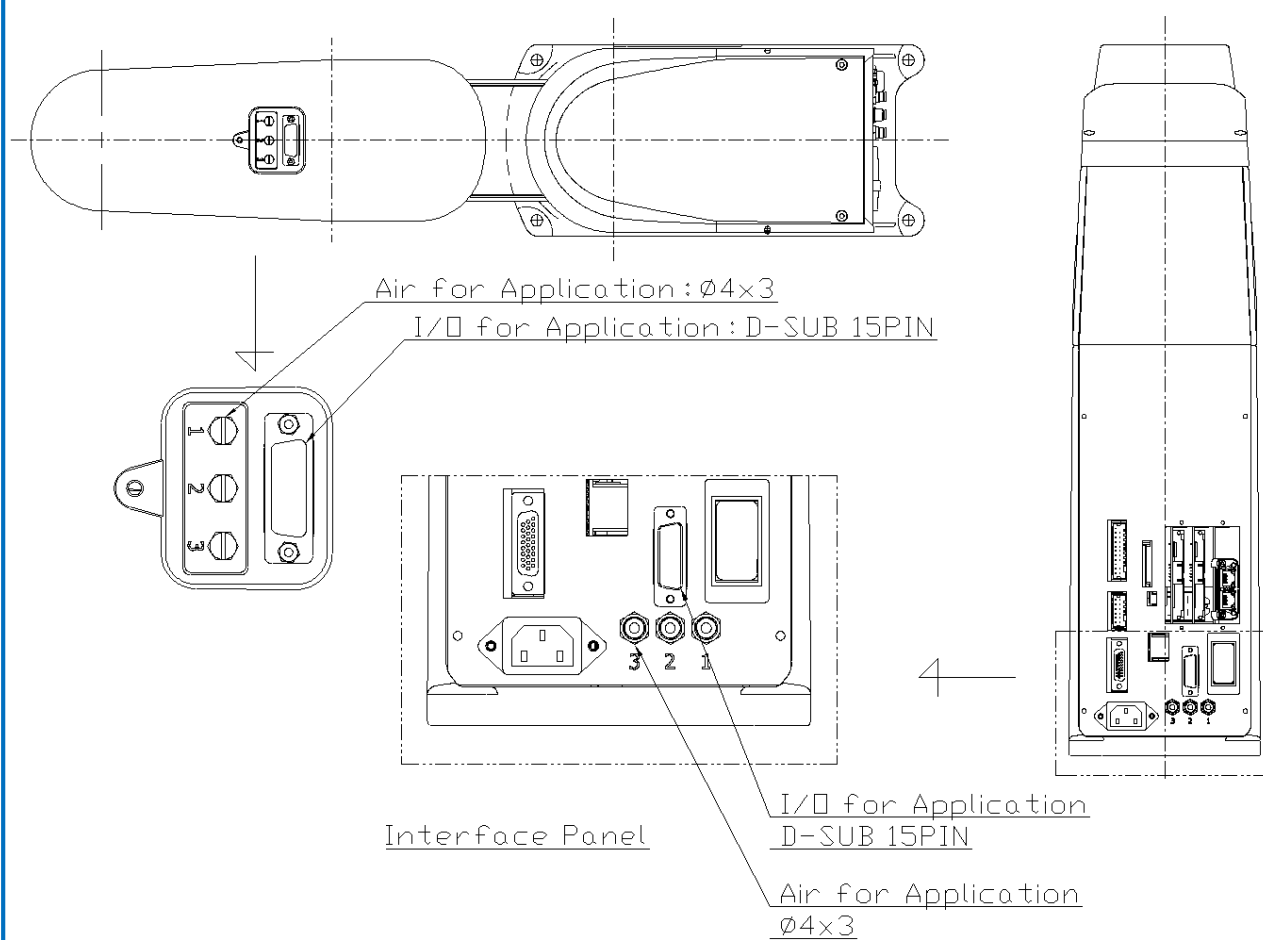
AR-P400H



Outside drawing

■ Interface panel

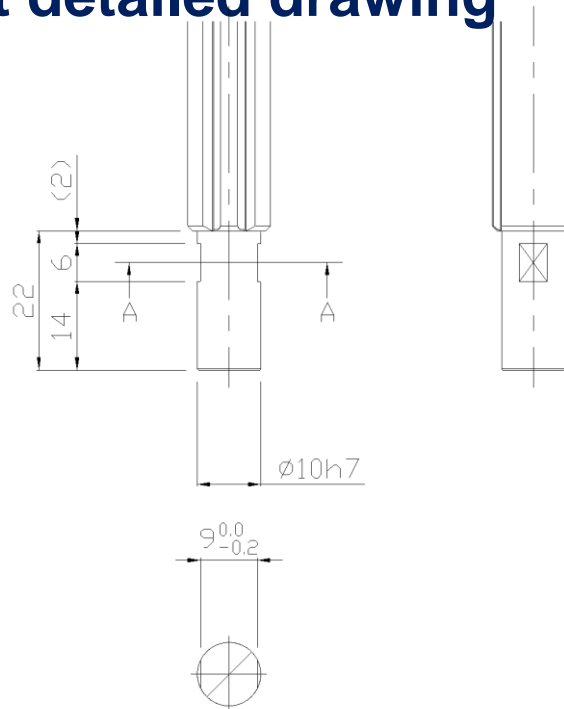
AR-P400H



Outside drawing

■ Detailed drawing

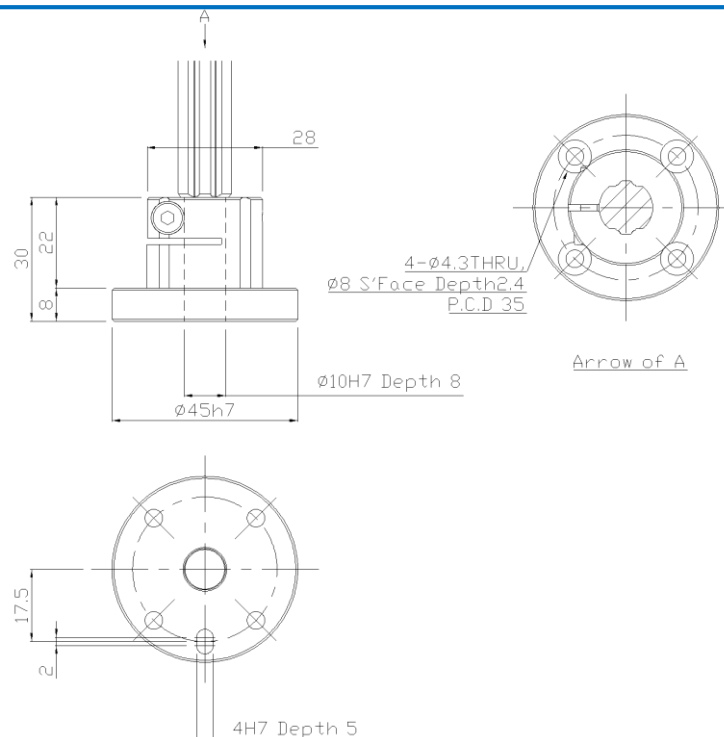
■ Tip part detailed drawing



Section A-A

■ Option

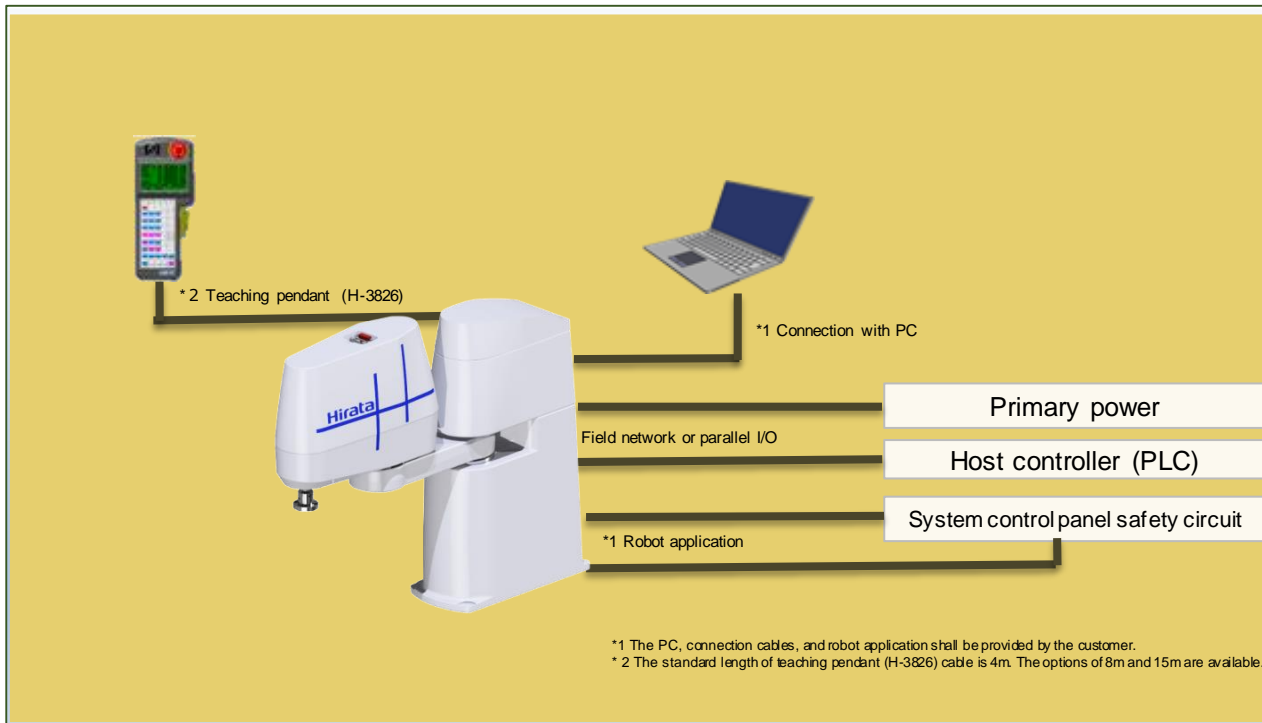
Application plate



Controller specification

■ Integrated type with robot

This controller can be used immediately after wiring is done and the power is supplied.



■ Supports major field networks

By adding an optional board, the controller can support major field networks.
As a result, host devices and robots can be easily connected.

◎ Field network

CC-Link	HPC-913
DeviceNet	HPC-992/40DNET
PROFINET	HPC-992/30PRON
EtherNetIP	HPC-992/30EIP
CC-Link IE	HPC-992/40CCIE

◎ DI/DO

PIO (NPN)	HPC-962
PIO (PNP)	HPC-963

◎ Option

Teach-pendant with 4m cable	H-3826-※-04-※-※
Teach-pendant with 8m cable	H-3826-※-08-※-※
Teach-pendant with 15m cable	H-3826-※-15-※-※
CV Tracking	HPC-865B
PC tool	Hr Works
Application plate	

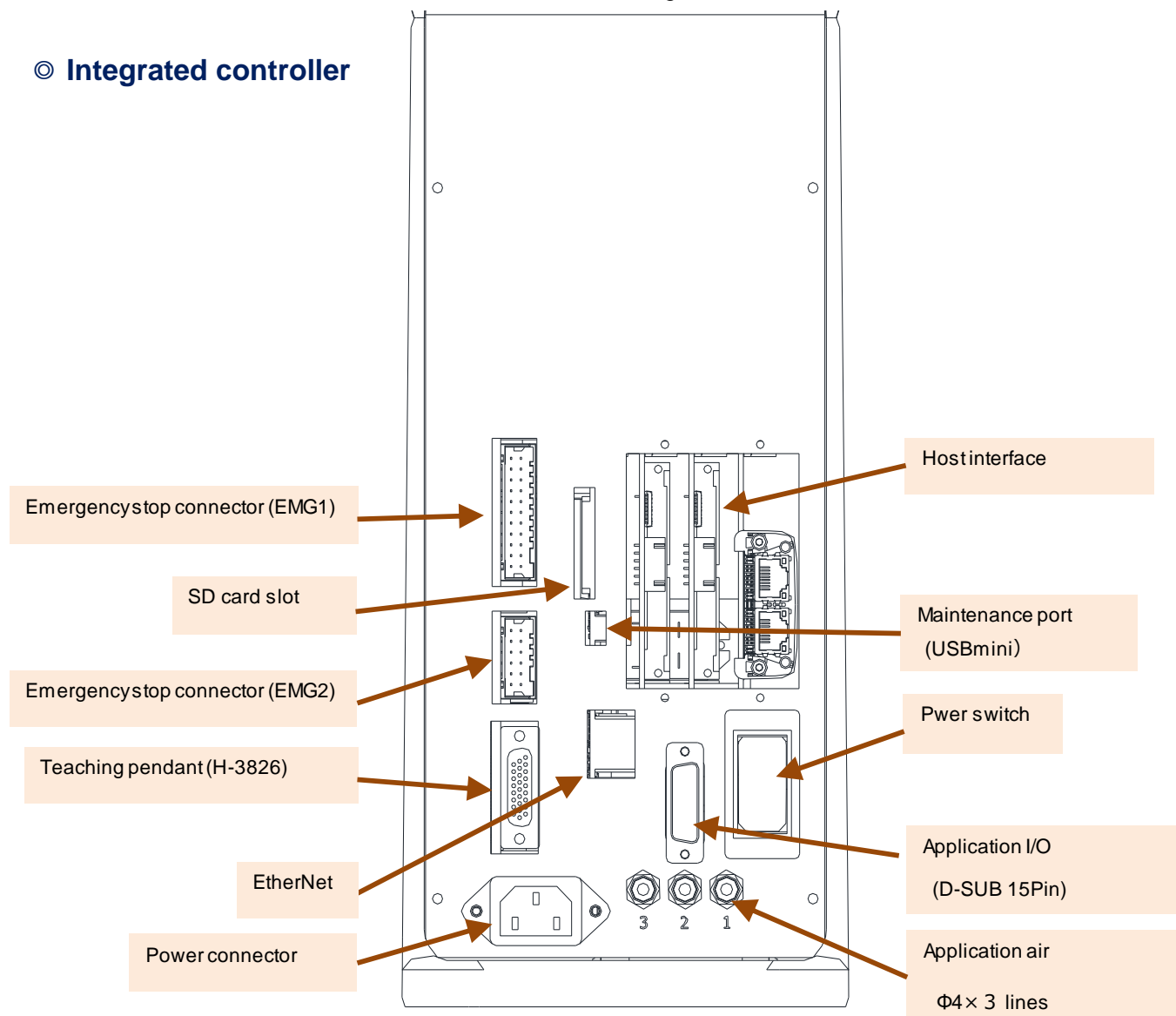
When using robot language, it is possible to use up to 3 boards in combination with DI/DO× 2 boards + field network× 1 board. It is also possible to make 32 IO points.

Controller specification

External connections

The external connections of the controller are shown in the figure below.

© Integrated controller



Model	AR-P400
Power source	Single-phase
	AC100~240V±10% 50/60Hz
Power capacity	0.5 k VA
Rated current	1.5A (AC200V)
	2.6A (AC100V)
Safety category	3*1
Number of axes	4 axes

* It is necessary to build a safety circuit outside the controller by the customer to comply with the safety category.

Option

■ Teaching pendant

< Example of model number >

H-3826----

Emergency stop switch label:
N: No label (normal)
R: ROBOT STOP
E: EMERGENCY STOP

Cable length:
04: 4m (normal)
08: 8m
15: 15m

CE marking:
N : No CE (normal)
C : Confirming CE

Operation mode key switch:
K : With key switch
N : No key switch



External dimensions	114mm (W) × 253mm (D) × 43mm (H)
Weight	Approx.1 kg (cable excluded)
Display	LCD 20Digits × 8Line, Monochrome
Language	English
Operation interface	Emergency stop switch Enable switch (3-position) Operation mode switch
Teaching	Registering current position Editing registered position data Adding and editing position data Checking position data
Protection grade	IP54
Parameter setting	Checking and setting parameters
Monitoring	Robot operation monitor (error status) Signal monitor (I/O signal status) Servo monitor (position, speed, current)

Option

■ PC tools

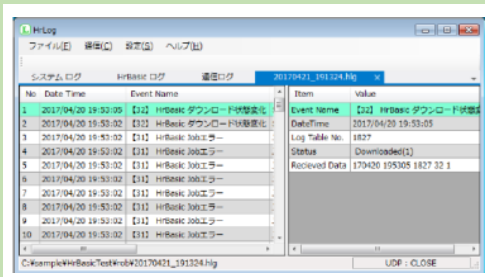
HrWorks is an integrated development tool for system using robots.

It enables to program and debug using a robot language (HrBasic).

Using the following tools from the installation to start-up shortens required time.

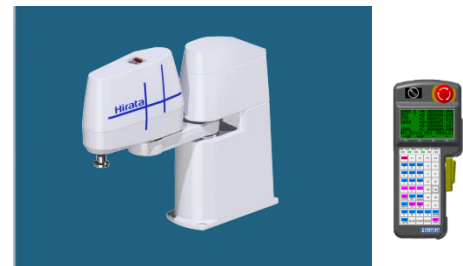
- Collect operation logs - HrLog

You can collect operation logs easily.



- Check cycle time easily - WinHNC10/ WinSTP Console

The robot is displayed as a 3D image on the monitor screen of a PC. The image moves like an actual production and emulates robotic system.

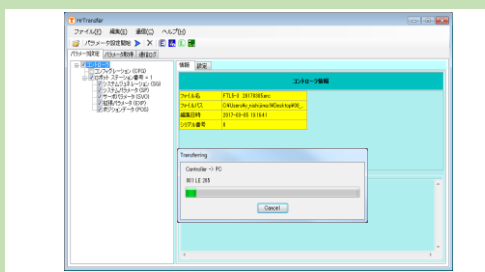


HrWorks



- Get data using a PC - HrTransfer

Robot data can be uploaded/downloaded between PC and controller.



- Edit robot data freely - HrEditor

HrEditor is computer utility software for editing data on-line and making a backup copy.



MEMO

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Hirata

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We are looking for an agent.



Safety precautions

● Comply with relevant laws, regulations, and other standards, and take safety measures. ● Please read the instruction manuals carefully before use.

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