

YASKAWA

Accessories

Program



Masters of Robotics, Motion and Control



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Accessories

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Cable Retraction

System for Teach Pendants



The automatic YASKAWA cable retraction system has been specially developed for the connecting cables of industrial robot teach pendants. This system is used to improve work safety in the production area and is a recognized accident prevention measure.

The stable housing is made of impactresistant plastic, while the mounting bracket is made of steel plate, enabling alignment of the retraction system housing in the direction in which the cable is pulled out.

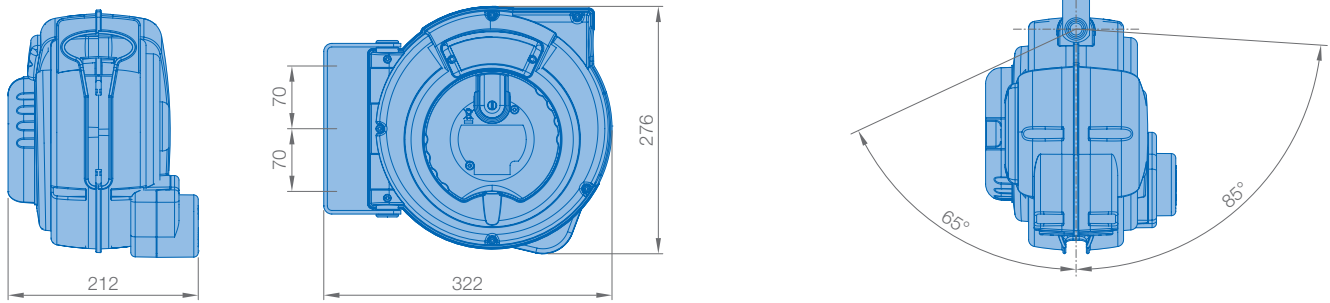
The cable deflection pulley is fitted with a spring element for cable retraction. Additionally, a releasable cable locking element is integrated at intervals of 50 cm so that the cable can be blocked if required when being pulled out or retracted.

Special connecting cables with high-strength polyurethane sheaths are used; these are highly flexible, flame-retardant and resistant to abrasion, oil and coolant. By being rolled up correctly, the cable is kept clean and damage is prevented.

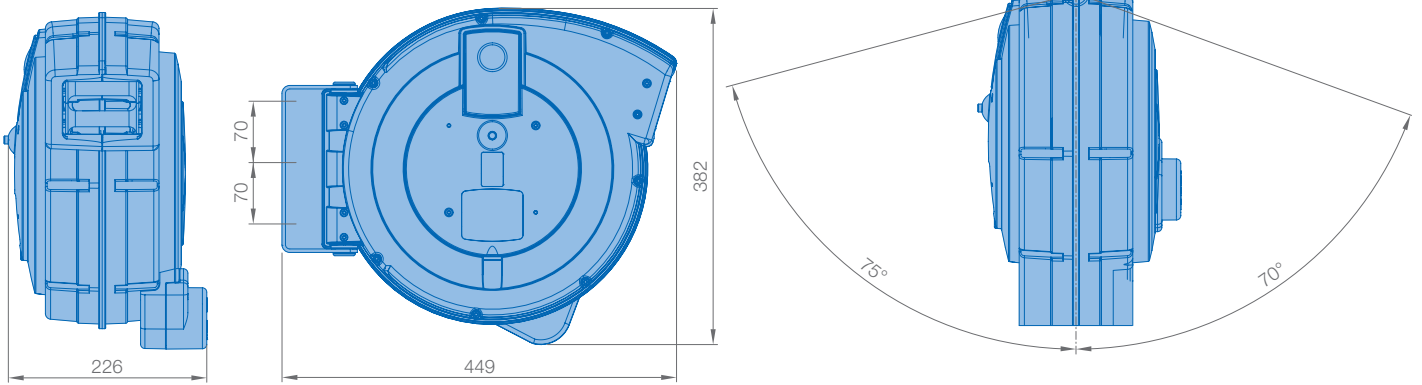
KEY BENEFITS

- Recognized as an accident prevention measure in manufacturing industry (in accordance with the occupational health and safety management system OHSAS 18001:2007, e.g. for the prevention of tripping hazards)
- Stable housing made of impactresistant plastic
- Cable deflection pulley with spring element enabling cable retraction
- Integrated slip ring system
- Releasable automatic cable locking element every 50 cm for blocking the cable when it is pulled out or retracted
- Stable mounting bracket of steel plate enables alignment of the retraction system housing in the direction in which the cable is pulled out
- Use of flexible, flame-retardant and resistant connecting cable
- Protection against dirt and damage to the cable by rolling it up correctly

Cable retraction small: H 322 x L 276 x P 212



Cable retraction large: H 449 x L 382 x P 226



After the teach pendant has been used, orderly and safe storage of the connecting cable is automatically assured. Damage to the cable and a potential tripping hazard due to incorrect storage of the cable are thereby avoided.

Article number	Designation
165738	Cable retraction M 2,5/10 m for PP cable
173582	Cable retraction M 5,0/10 m for PP cable
165740	Cable retraction L 2,5/20 m for PP cable
173583	Cable retraction L 5,0/20 m for PP cable

Approval and quality features

- TÜV-inspected quality and functions in accordance with**
- ISO EN 13849-1 e2 (Risk assessment acc. Performance Level "e")
 - IEC EN 60204-1 (Safety of machinery)
 - UNI EN ISO 10218-1 (Risk assessment and safety requirements for industrial robots)

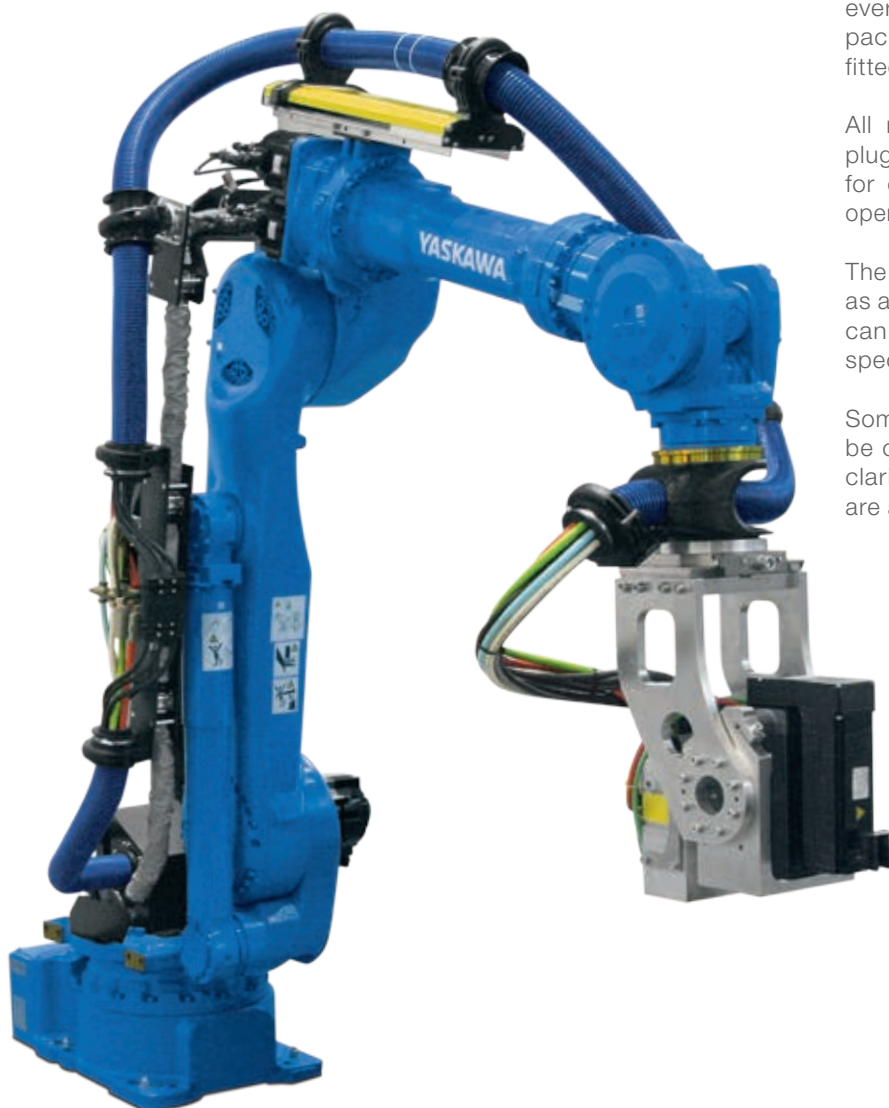
- Integrated slip ring system**
- Protection classification IP54
 - ISO 9001 certified manufacturing; CE and RoHS compliant

Optional accessories

Available in 2 cable lengths: 10 and 20 metres

Media Packages

suitable for all Applications



YASKAWA offers the complete robot portfolio for every application – including additional media packages. If required by the customer, these are fitted directly on the robot prior to delivery.

All media lines are terminated as standard with pluggable connections, with air hoses are suitable for compressed air. Each of the upper ends are open and delivered with 1 m length of cable or hose.

The robot typical intermediate flanges are provided as an option. If additional media are required, these can be custom configured in accordance with specific requirements.

Some media packages are predefined and can thus be ordered directly without the need for additional clarification. Furthermore, replacement packages are available for all existing packages.

KEY BENEFITS

- Available for all applications
- Directly installed on the robot
- All media lines on bottom terminated with pluggable connections
- Predefined and variable media combinations
- Wiring connectors included
- Replacement packages

Overview Media Packages

Robot	Axes	Empty conduit	HA: Handling Profibus	HA: Handling ProfNet	PS: Spotwelding Servo Gun	MAG-HA: Welding and Handling
MH12	1-3	176242	176267	178913		
	4-6	176243	176268	178914		
MH24	1-3	176244	176269	178159		
	4-6	176245	176270	178915		
MH50 II	1-3	176247	176271	178916		176298
	4-6	176248	176272	178917		176299
MH50-35 II	1-3	176247	176271	178916		176298
	4-6	176249	176273	178918		176300
MH50-20 II	1-3	176247	176271	178916		176298
	4-6	176250	176274	178919		176301
MS80W II	1-3	176251	176275	178920	176289	176302
	4-6	176252	176276	178921	176290	176303
MH110	1-2	176253	176277	179190		176304
	2-6	176254	176278	179191		176305
MH180	1-2	176255	176279	178922		176306
	2-6	176256	176280	178923		176307
MH225	1-2	176257	176281	179192		176308
	2-6	176258	176282	179193		176309
MS100 II	1-2	176259	176283	179194	176292	176310
	2-6	176260	176284	179195	176293	176311
MS165	1-2	176261	176285	179196	176294	176312
	2-6	176262	176286	179197	176295	176313
MS210	1-2	176263	176287	179198	176296	176315
	2-6	176264	176288	179199	176297	176316

Cable Structure:

Robot	Ø NW	HA Profibus	HA ProfiNet	MAG-HA	PS
MH12, MH24	29				
MH50 II, MH50-35 II, MH50-20 II, MS80W II	48				
MS100 II, MH110, MS165, MH180, MS210, MH225	70				

Robot Pedestals and Robot Base Plates

for MOTOMAN Robots



As a robot manufacturer with our own systems engineering facilities, we are able to offer not just the robot, but also matching pedestals or base plates from a single source. This not only saves you organizational effort, but also ensures that you receive coordinated products that can be used directly.

KEY BENEFITS

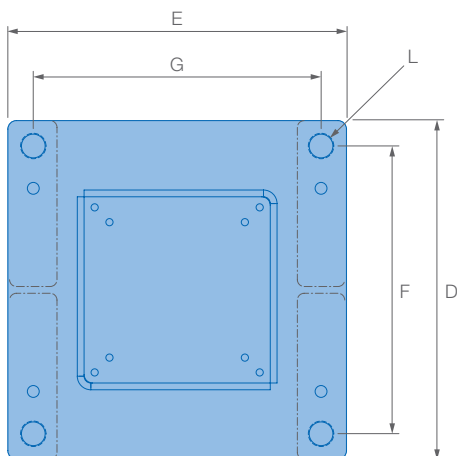
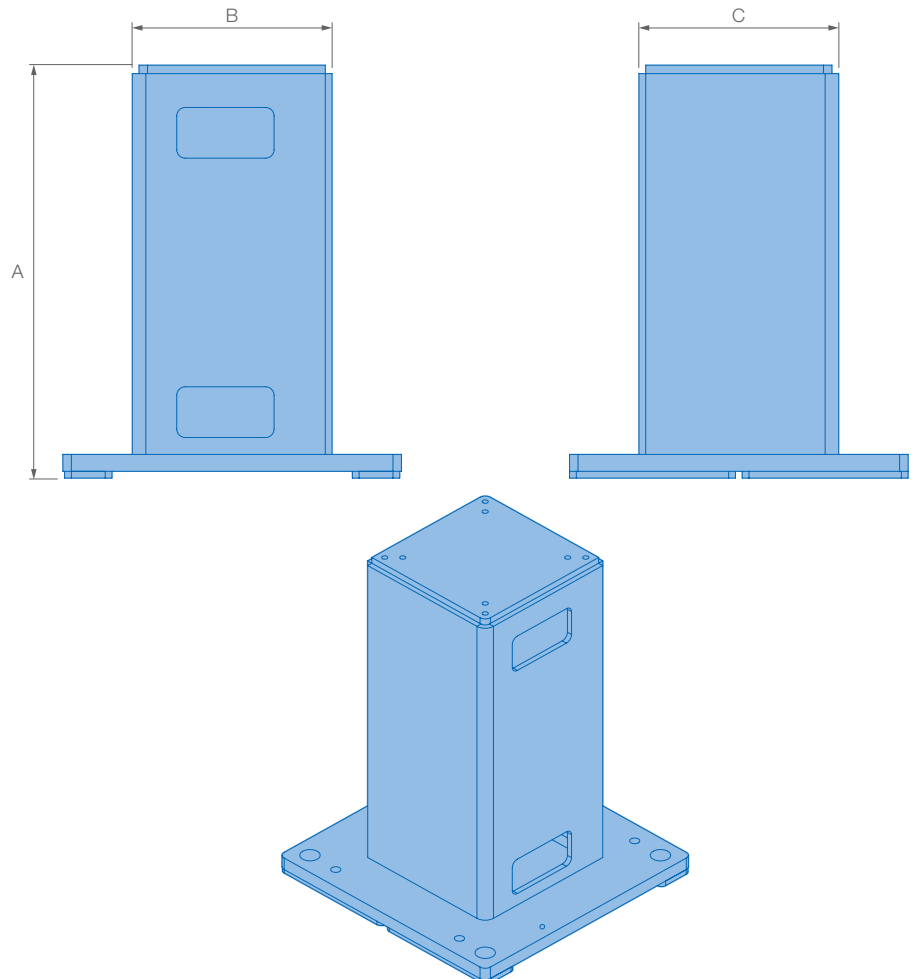
- Suitable for our most common robot models
- Wide range to meet your requirements
- High-quality painted steel structure
- Simple fastening by means of anchor bolts/bolted connections
- Height-adjustable
- Re-usable with the same robot model

Robot Pedestals XS-series

- Robot pedestals for MOTOMAN robots
- Steel structure, painted, RAL 5005 (blue)
- Fastening by means of anchor bolts/bolted connections
- Height-adjustable

For the following robot types:

MH5S II, MH5LS II, MH5F, MH5LF, GP7, GP8



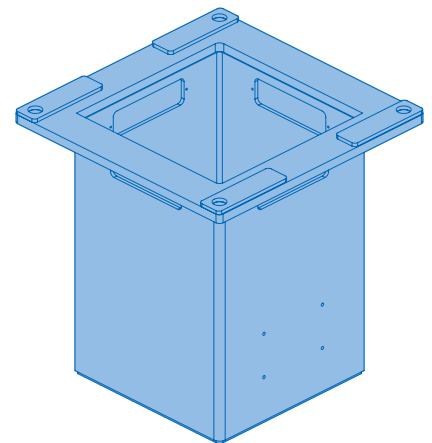
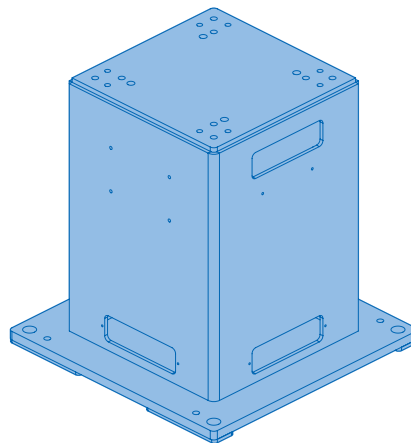
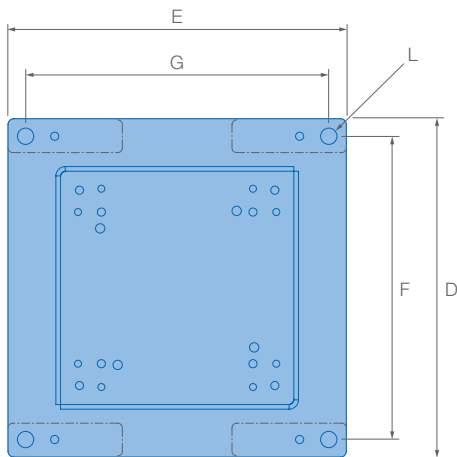
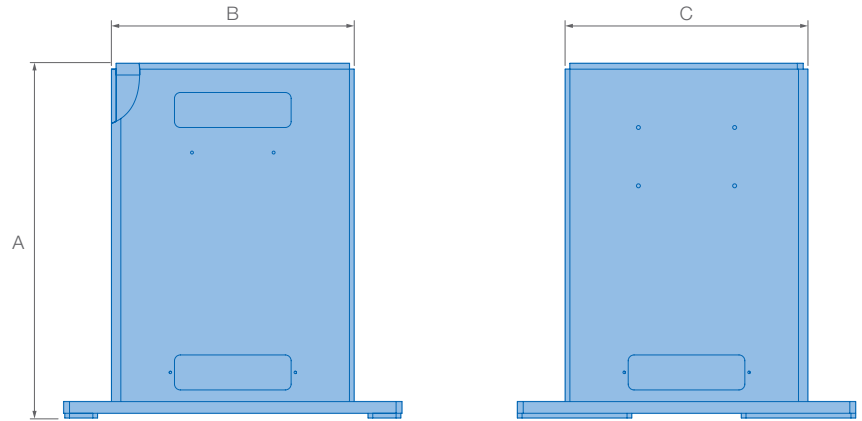
Robot pedestals	XS-series									
	A	B	C	D	E	F	G	L	Weight	SAP
XS-RS200	200	240	240	400	400	320	320	4 x Ø 27	37	172543
XS-RS300	308	236	236	400	400	340	340	4 x Ø 28	39	149625
XS-RS400	408	236	236	400	400	340	340	4 x Ø 28	44	167318
XS-RS500	500	240	240	400	400	320	320	4 x Ø 27	50	172536
XS-RS600	608	236	236	400	400	340	340	4 x Ø 28	58	146090
XS-RS900	908	236	236	400	400	340	340	4 x Ø 28	72	153560

Robot Pedestals S-series

- Robot pedestals for MOTOMAN robots
- Steel structure, painted, RAL 5005 (blue)
- Fastening by means of anchor bolts/bolted connections
- Height-adjustable

For the following robot types:

MH6SF, MH6SF-10, MH6F, MH12, MH12F, MH24, MA1440, MA2010, GP12



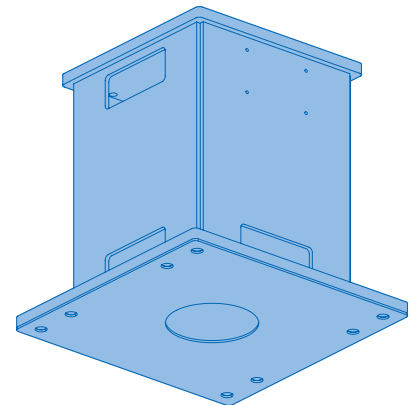
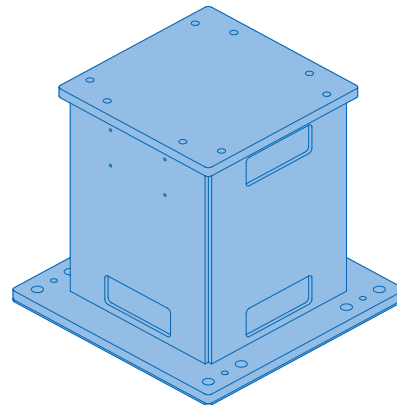
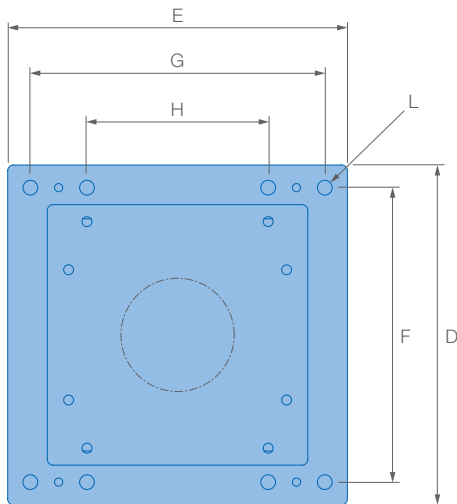
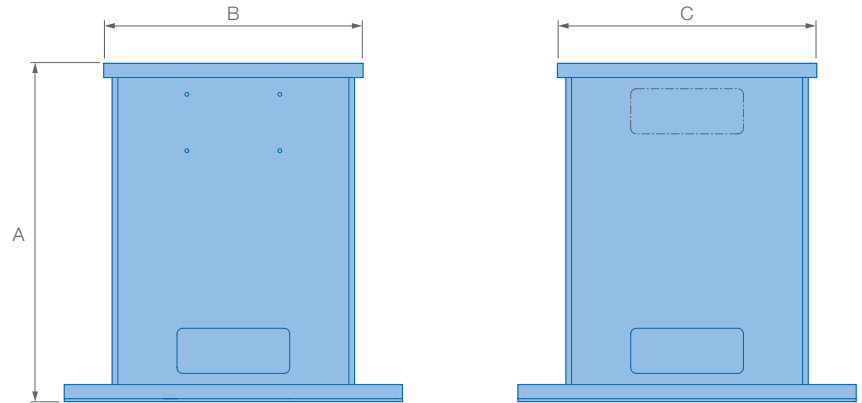
Robot pedestals	S-series									
	A	B	C	D	E	F	G	L	Weight	SAP
S-RS200	200	400	400	580	580	520	520	4 x Ø 26	101	129569
S-RS300	308	416	416	580	580	520	520	4 x Ø 28	78	139376
S-RS400	400	410	410	580	580	520	520	4 x Ø 26	145	131272
S-RS500	500	400	400	580	580	520	520	4 x Ø 26	121	139438
S-RS600	608	416	416	580	580	520	520	4 x Ø 28	108	139375
S-RS900	908	416	416	580	580	520	520	4 x Ø 28	138	140285
S-RS1200	1208	416	416	580	580	520	520	4 x Ø 28	169	139364

Robot Pedestals M-series

- Robot pedestals for MOTOMAN robots
- Steel structure, painted, RAL 5005 (blue)
- Fastening by means of anchor bolts/bolted connections
- Height-adjustable

For the following robot types:

MH50II, MH50-20 II, MH50-35 II, MS80W II, MPL80 II, MS100, VS100, MH110



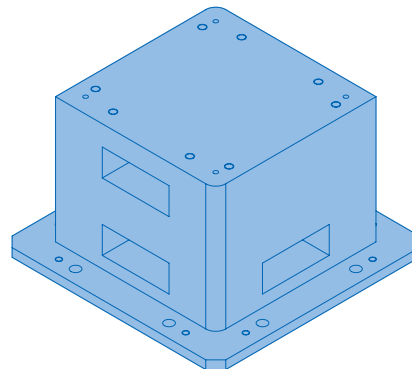
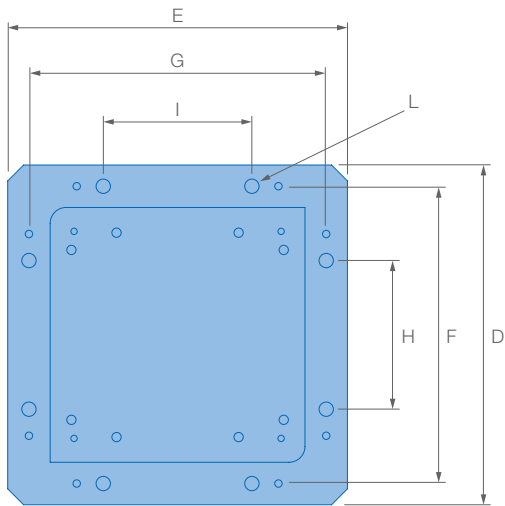
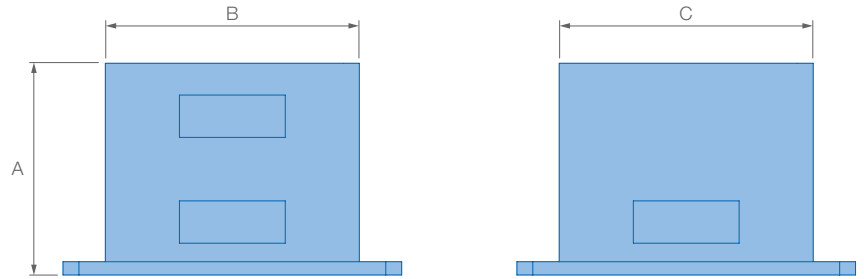
Robot pedestals	M-series										
	A	B	C	D	E	F	G	H	L	Weight	SAP
M-RS200	200	460	460	600	600	520	520	320	8 x Ø 26	120	151373
M-RS300	300	470	470	600	600	520	520	320	8 x Ø 26	147	129564
M-RS500	500	460	460	600	600	520	520	320	8 x Ø 26	176	131589
M-RS600	600	460	460	600	600	520	520	320	8 x Ø 26	188	131791
M-RS700	700	460	460	600	600	520	520	320	8 x Ø 26	202	145436
M-RS900	900	460	460	600	600	520	520	320	8 x Ø 26	228	142843
M-RS1200	1200	450	450	620	620	540	540	340	8 x Ø 26	279	141768

Robot Pedestals M-series

- Robot pedestals for MOTOMAN robots
- Steel structure, painted, RAL 5005 (blue)
- Fastening by means of anchor bolts/bolted connections
- Height-adjustable

For the following robot types:

MH50II, MH50-20 II, MH50-35 II, MS80W II, MPL80 II, MS100, VS100, MH110



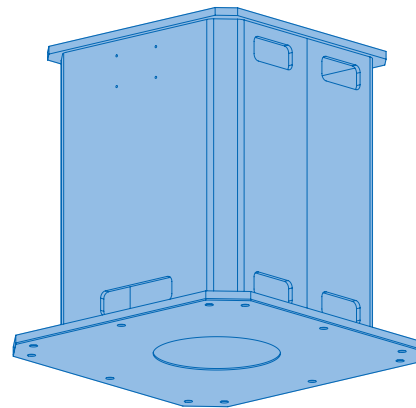
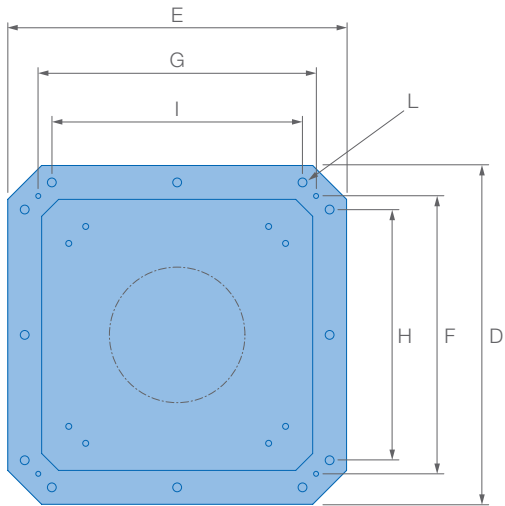
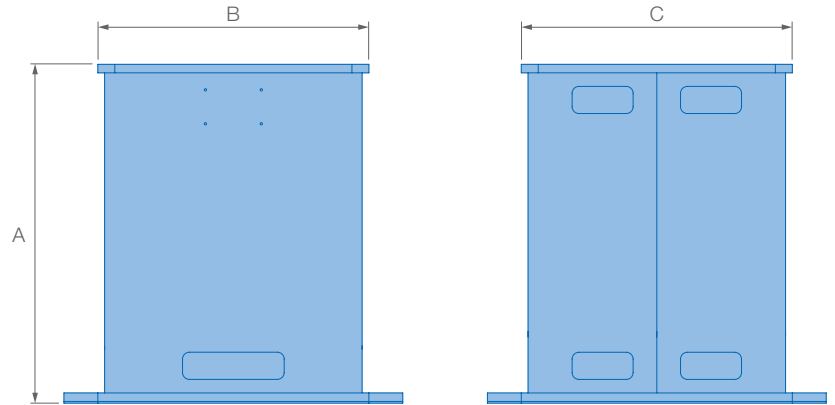
Robot pedestals	M-series											
	A	B	C	D	E	F	G	H	I	L	Weight	SAP
M-RS400	400	460	460	640	640	560	280	280	280	8 x Ø 27	128	172524

Robot Pedestals L-series

- Robot pedestals for MOTOMAN robots
- Steel structure, painted, RAL 5005 (blue)
- Fastening by means of anchor bolts/bolted connections
- Height-adjustable

For the following robot types:

ES165RD II, ES200RD II, MPL100 II, MH180-120, MPL160 II, MS165, MH180, MS210, MH225, MH250, MH280



Robot pedestals	L-series											
	A	B	C	D	E	F	G	H	I	L	Weight	SAP
L-RS300	300	800	800	1000	1000	900	900	740	740	12 x Ø 26	430	141250
L-RS400	400	800	800	1000	1000	900	900	740	740	12 x Ø 26	463	136379
L-RS600	600	800	800	1000	1000	900	900	740	740	12 x Ø 26	511	139389
L-RS900	900	800	800	1000	1000	900	900	740	740	12 x Ø 26	610	139751
L-RS1800	1800	900	900	1800	1800	1650	1650	1250	1250	12 x Ø 28	1720	145821

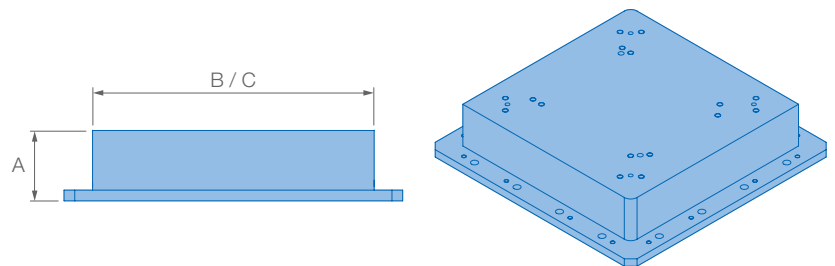
Robot Pedestals L-series

- Robot pedestals for MOTOMAN robots
- Steel structure, painted, RAL 5005 (blue)
- Fastening by means of anchor bolts/bolted connections
- Height-adjustable

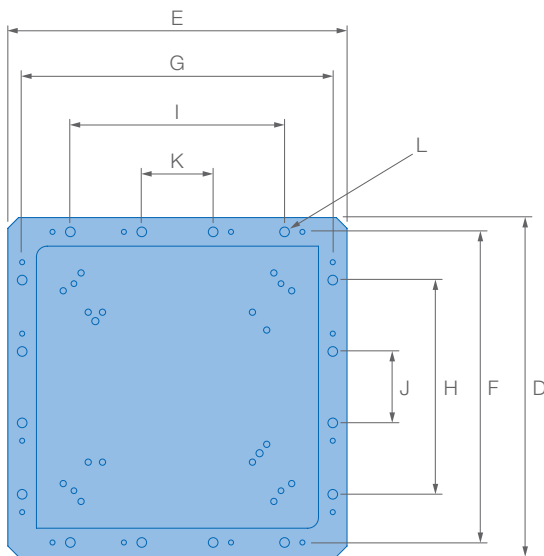
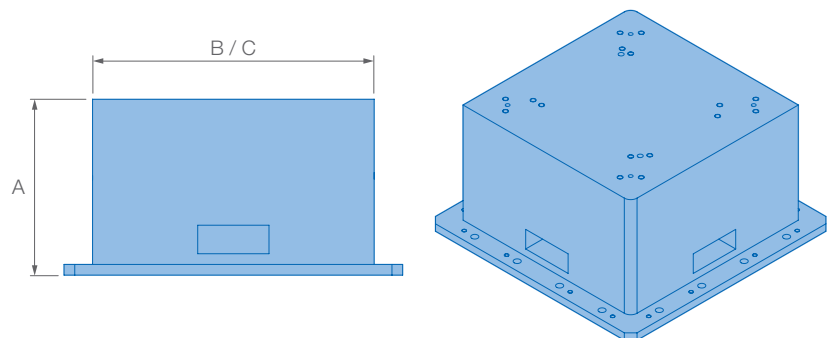
For the following robot types:

ES165RD II, ES200RD II, MPL100 II, MH180-120, MPL160 II, MS165, MH180, MS210, MH225, MH250, MH280

L-RS200



L-RS500



Robot pedestals	L-series												Weight	SAP
	A	B	C	D	E	F	G	H	I	J	K	L		
L-RS200	200	800	800	950	950	870	870	600	600	200	200	16 x Ø 27	238	172535
L-RS500	500	800	800	950	950	870	870	600	600	200	200	16 x Ø 27	334	172533

Robot Base Plates (RGP)

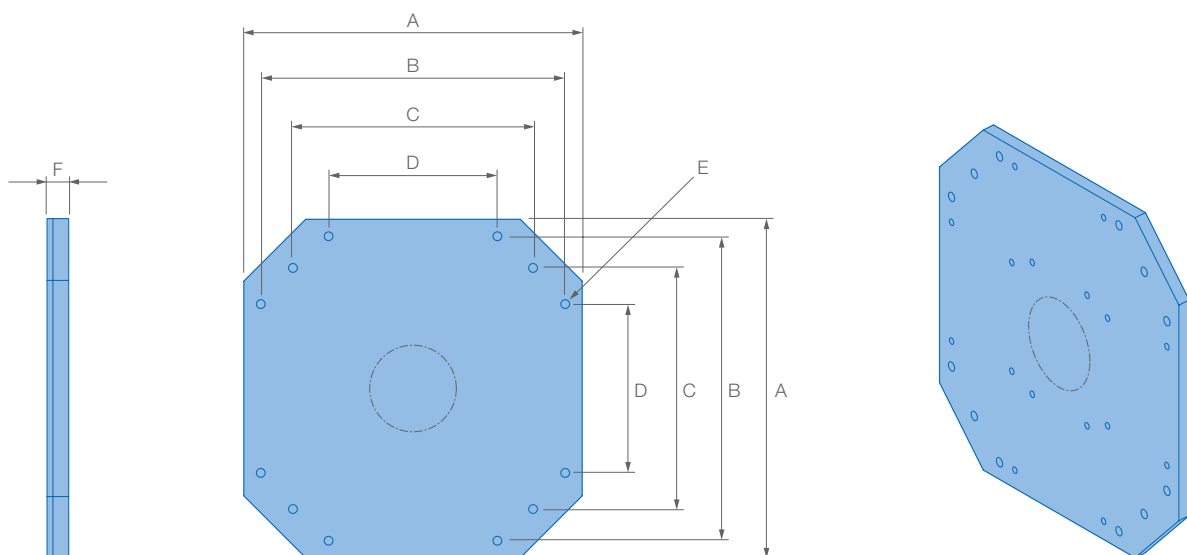
- Robot base plates for MOTOMAN robots
- Steel structure, painted, RAL 5005 (blue)
- Fastening by means of anchor bolts/bolted connections
- Height-adjustable

For the following robot types:

S-RGP: MH6SF, MH6SF-10, MH6F, MH12, MH12F, MH24, MA1440, MA2010

M-RGP: MH50 II, MH50-20 II, MH50-35 II, MS80W II, MPL80 II, MS100, VS100, MH110

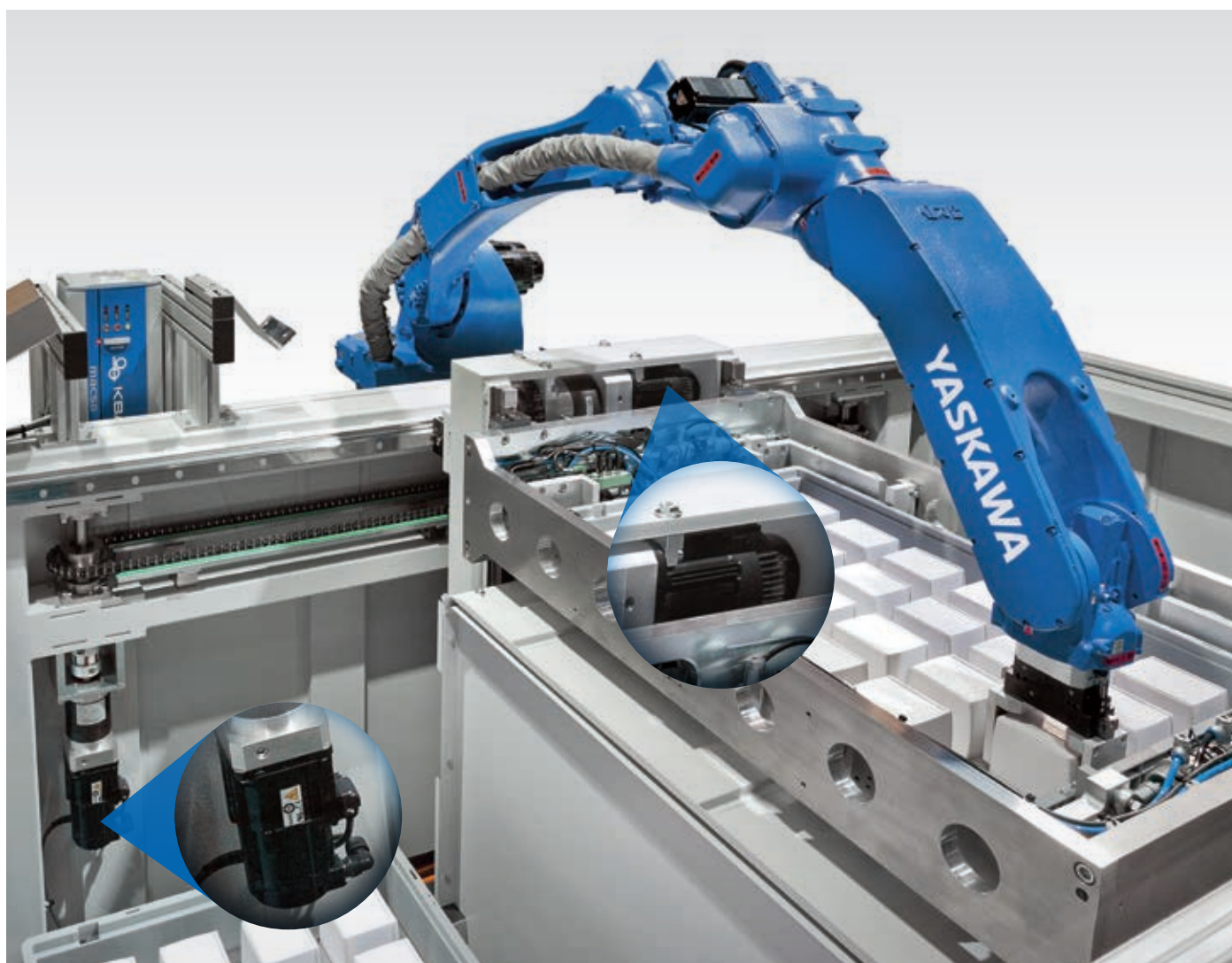
L-RGP: ES165RD II, ES200RD II, MPL100 II, MH180-120, MPL160 II, MS165, MH180, MS210, MH225, MH250, MH280



Robot base plates								
	A	B	C	D	E	F	Weight	SAP
S-RGP	580	520	—	—	4 x Ø 26	30	78	138481
M-RGP	1000	900	710	500	12 x Ø 26	35	252	133920
L-RGP	1200	1100	910	700	12 x Ø 26	45	480	129563

External Drive Axis Packages

for MOTOMAN Robots with DX200 Controller



As a leading developer and manufacturer of servomotors and controllers, YASKAWA is able to cover a very large part of the in-house value creation chain.

This does not only mean that our robot motors are perfectly tailored to our controllers, but also that we are able to provide external axes from a single source. These can be controlled easily by our controllers as are the robot axes themselves.

You will experience the result for yourself – components from a single source that are easy to integrate and that blend harmoniously into your overall installation.



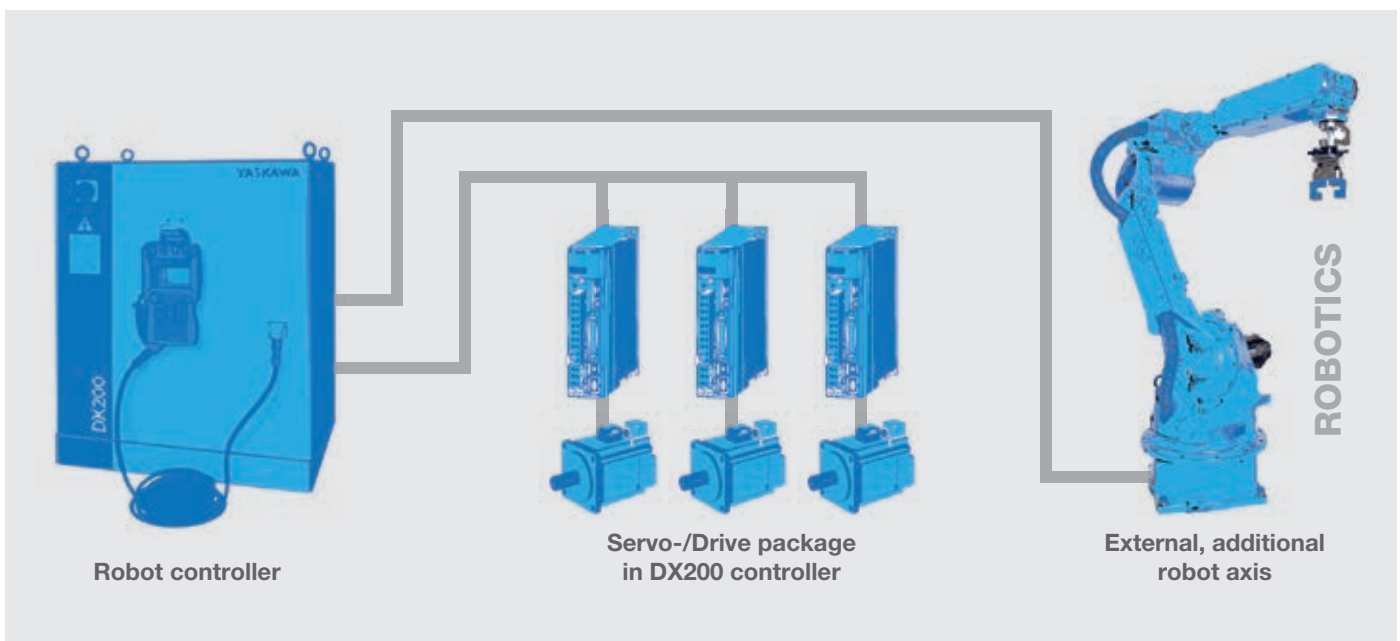
Cable package consisting of power and signal cables, available in lengths of 3 m, 6 m, 9 m, 12 m, 15 m, 18 m, 21 m, 24 m, 27 m, max. 30 m. Optionally with external axis disconnection for 1 – 3 external axes in DX200 controller.

KEY BENEFITS

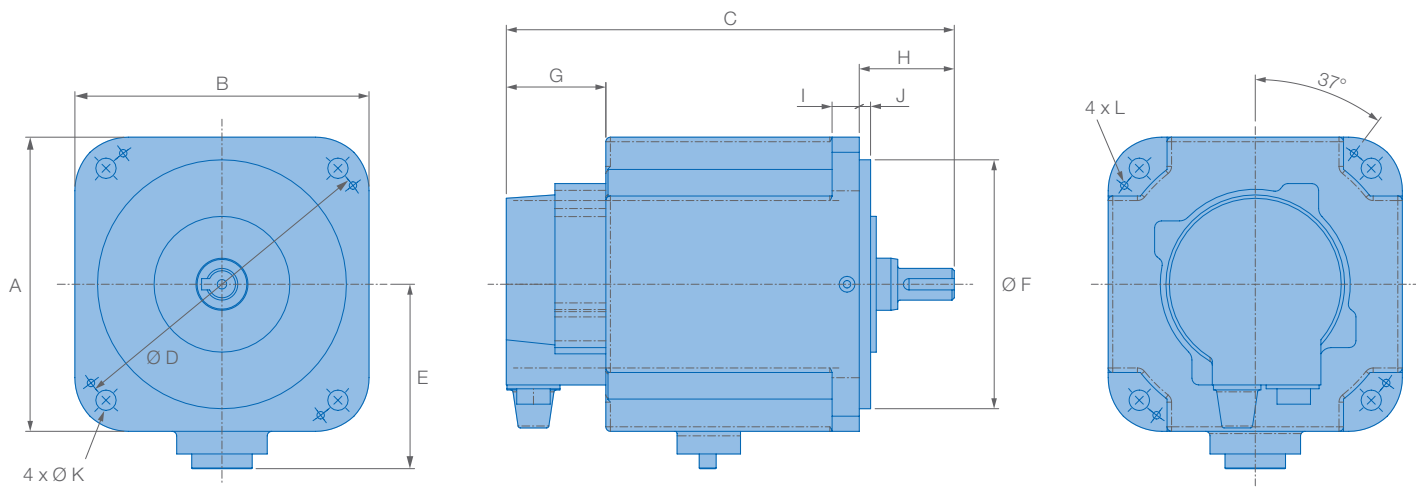
- Fully integrated additional robot axis
- Compatible with multi-synchronous operation
- Power categories from 0.5 up to 5.5 kW
- Functional unit consisting of SGMRV servomotor, servo/control package as well as power and signal cables
- Up to 3 servo packages can be integrated in the DX200 controller in standard configuration

Servomotors	SGMRV		
	Rated power [kW]	Flange face [mm]	SAP
SGMRV-05ANA-YR11	0.5	130 x 130	144096
SGMRV-09ANA-YR11	0.9	130 x 130	144076
SGMRV-13ANA-YR11	1.3	130 x 130	114074
SGMRV-20ANA-YR11	2.0	130 x 130	144110
SGMRV-30ANA-YR11	3.0	180 x 180	144108
SGMRV-37ANA-YR11	3.7	180 x 180	144071
SGMRV-44ANA-YR11	4.4	180 x 180	144109
SGMRV-55ANA-YR11	5.5	180 x 180	149146

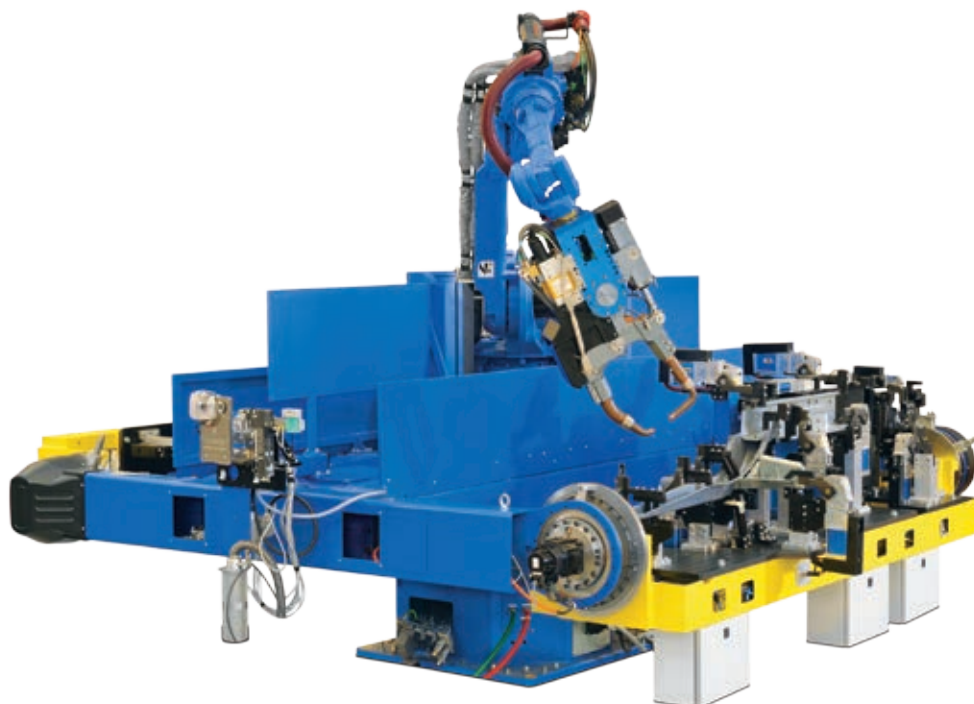
Set-up:



Technical Data/Parameters for SGMRV Servomotors:



Models	Technical data SGMRV servomotors											
	A/B	C	D	E	F	G	H	I	J	K	L	SAP
SGMRV-05ANA-YR11	130	198	145	81.5	110	44	42	12	5	9	M4	144096
SGMRV-09ANA-YR11	130	235	145	81.5	110	44	47	12	5	9	M4	144076
SGMRV-13ANA-YR11	130	234	145	104	110	45	45	12	6	9	M4	114074
SGMRV-20ANA-YR11	130	252	145	104	110	45	45	12	6	9	M4	144110
SGMRV-30ANA-YR11	180	271	200	134	114	37	63	18	3.2	13.5	M6	144108
SGMRV-37ANA-YR11	180	283	200	134	114	37	63	18	3.2	13.5	M6	144071
SGMRV-44ANA-YR11	180	295	200	134	114	38	63	18	3.2	13.5	M6	144109
SGMRV-55ANA-YR11	180	393	200	134	114	38	92	18	3.2	13.5	M6	149146



Touch Sensor

Search Sensor with Welding Wire



YASKAWA Touch Sensor uses the MIG-/MAG welding torch to search the exact location of seams. Despite many other existing sensors, some systems especially used in crude areas, continue searching with the welding wire. This sensor does not add additional contour because it is based on the welding torch.

In some current welding power sources a search function already exists. Often enough, however, the search voltage of the power source is not enough to work with primed or rusty components safely.

The new YASKAWA Touch Sensor offers all necessary functions in a simple box. The search voltage is possible from 30 volts to 90 volts, so that all material qualities will be searched safely.

The touch sensor securely separates the search potential and prevents the destruction of all electronics necessary accessory when searching with welding wire is a wire cutter and clamping of the wire – like in push pull torches.

KEY BENEFITS

- Variable search voltage
- Easy integration
- Compact design
- Search without additional contours

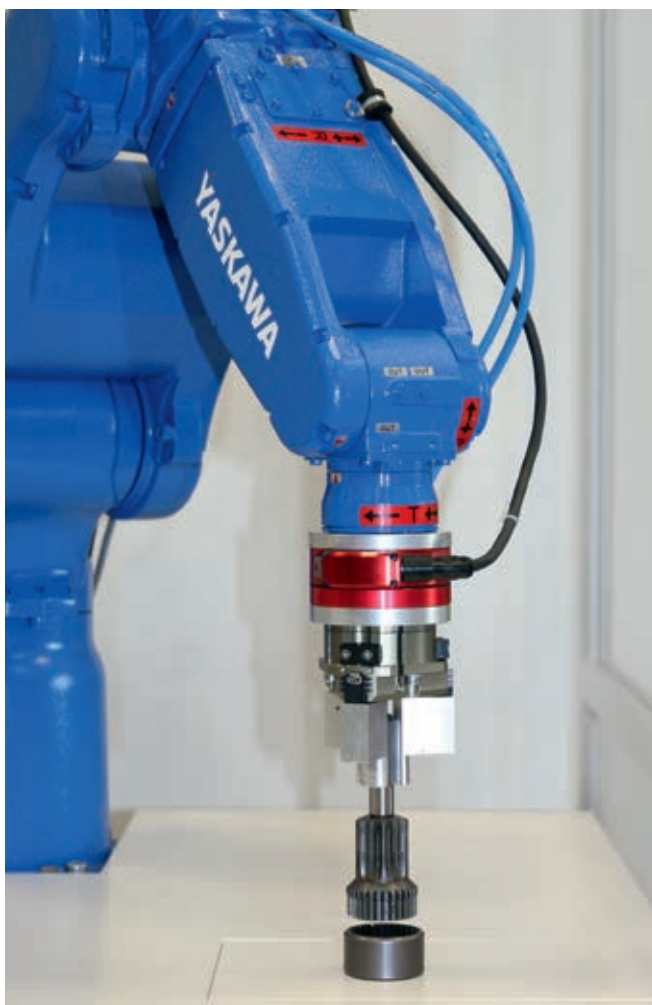
Example in Welding System:

Search voltage
30 – 90 V



MotoFit

Force Control Assembly Tool



KEY BENEFITS

- High tolerance assembly
- Built-in programming tools
- Improved reliability

MotoFit alters the robot's position based on the force encountered to align or assemble parts. (During normal robot operation, the robot is setup for positional control. It moves to or retains position even when external forces are applied, provided that forces do not exceed limits that would cause an error.)

The six-axis force sensor detects three translational forces and three axial moments to detect external forces during job execution. Three operations (touching, fitting and inserting) are combined to provide automatic precision fits of mating surfaces of 10 –100 μm .

High-speed fits up to 20 mm deep with h7/H7 tolerance can typically be done in five seconds. Also the force sensing control parameters can be taught quickly without unique skills. Its hole position detection and snag prevention increase reliability.

The Engineering Support Tool (EST), a PC application, is used for sensor setup and job creation. It supports one or two robots, up to 24 force files, and robot or tool coordinate systems. Therefore jobs can be edited on the controller if needed.

Features

- Ability to enable or disable each translational force or axial moment
- Helpful graphics for troubleshooting and setup
- Step-by-step instructions
- Ideal for precision part assembly applications including drive train components, seats, electronics, battery assembly and nondestructive testing

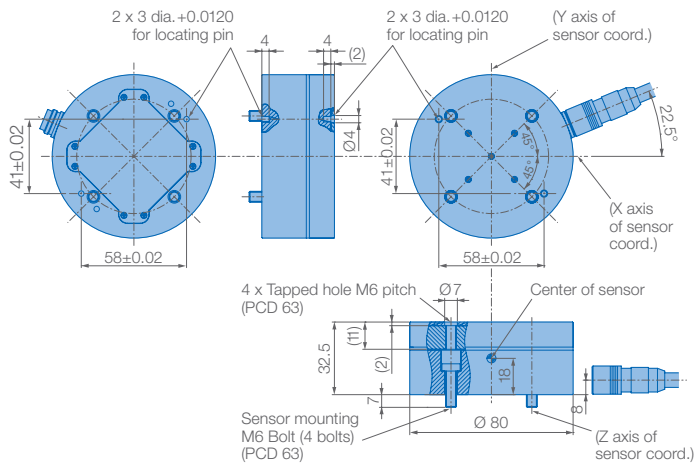
Components

- Six-axis sensor (200 N (V) or 1000 N (H or V))
- High-speed communication board
- Power supply box
- Robot-specific mounting flange adapter
- Engineering Support Tool software with interface panel software

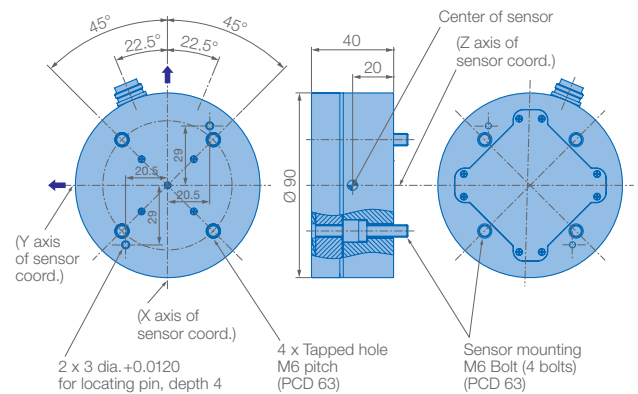
Controlled by
FS100

Controlled by
DX200

200 N Sensor



1000 N Sensor



Specifications		
Operation functions	Touching function (dedicated INFORM language)	
	Fitting function (dedicated INFORM language)	
	Inserting function (dedicated INFORM language)	
Functions that increase reliability	Search function, snagging prevention function	
Teaching method	Semi-automatic adjustment method using Engineering Support Tool for MotoFit functions; runs on customer's personal computer	
6-axis force sensor	Dedicated sensor specified by YASKAWA Electric (provided as an accessory at delivery); two types with rating of 200N and 1000N	
Conditions for applicable workpieces	Geometry	Cylindrical
	Fit clearance	h7/H7 or greater; clearance must be at least 10 µm
	Chamfer	C 0.1 or more
	Fit depth	20 mm or less
	Initial position error	± 1 mm or less
Other functions	Force-tracking function (dedicated macro command)	
	Pressing function (dedicated macro command)	
	Force-sensing function (dedicated macro command)	
Support for MotoPlus	Force control service API (must be specified as option)	

		6-axis sensor rated 200 N	6-axis sensor rated 1000 N*
Rated load	Fx, Fy, Fz	200 N	1000 N
	Mx, My, Mz	4 Nm	30 Nm
Load protection stopper to work	Fx, Fy, Fz	1000 N	5000 N
	*Mx, My, Mz	6 Nm	50 Nm
Resolution		0.024 N	0.12 N
Supply voltage		24 V DC	24 V DC
Sampling frequency		2 kHz	2 kHz
Dustproof / Waterproof		IP65	IP65
Inductive noise immunity		1500 V	1500 V
Size [mm]		w 80 x H 32.5	w 90 x H 40
Weight [g]		360	580

Robot compatibility

DX200 models: MH5SII, MH5LSII, MH12, MH24
 FS100 models: MH5F, MH5LF, MH6F, MH6F-10, MH12F

Ambient conditions

- Ambient operating temperature: 0 to +40° C
- Less moisture and dry (humidity: 20 to 80 % RH, non-condensing)
- Free from dust, dirt, oil mist, and water drop
- Free from corrosive gases or liquid, or explosive gases or liquid
- Free from excessive impact or vibration (4.9 m/s² [0.5 G] or less)
- Free from large electrical noise (TIG welder, etc.)
- The flatness for installation is 0.5 mm or less

* Installation of MotoFit sensor may change robot range of motion. Installation of MotoFit sensor must be considered when evaluating robot wrist suitability for a given project.

Vision System

Camera & Software MotoSight2D



The new MotoSight2D Vision combines leading vision technology with leading robotic technology. The MotoSight2D product range is based on compact 2D cameras in 3 different performance classes. In addition to simple data exchange, programming of the camera from the teach pendant of the robot is also possible.

The tool set of the camera covers a wide range of camera applications, from Pick&Place applications to quality monitoring tasks. Of particular note here is the patented Patmax algorithm, the benefits of which are exploited to the full in typical Pick&Place applications.

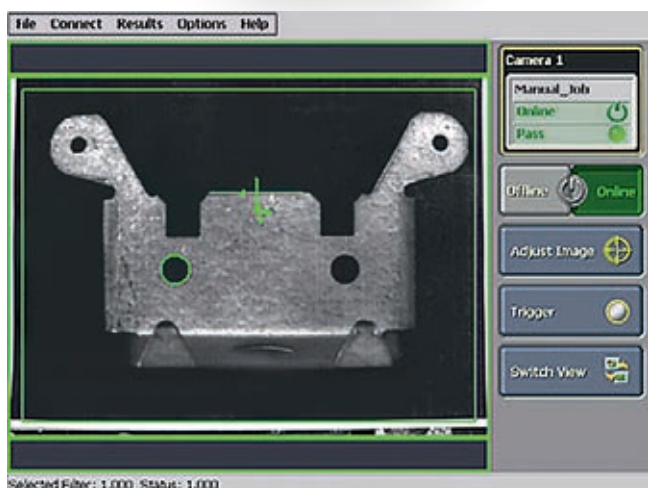
KEY BENEFITS

Camera:

- Direct communication with software MotoSight2D
- High speed and resolution
- Flexible mounting (on robot or free standing)
- Several equipment available

Software:

- Monitoring of up to 4 cameras
- Display camera image (live) on robot teach pendant
- Simple assignment of vision results to robot variables
- Storage of current jobs and images



Controlled by
DX200

Equipment (Base Camera Kit)

Scope of supply:

- Camera (MS100, MS200, MS300)
- MotoSight2D Software

Other necessary components:

- Lens
- Ethernet and power cable

Features

Pendant features:

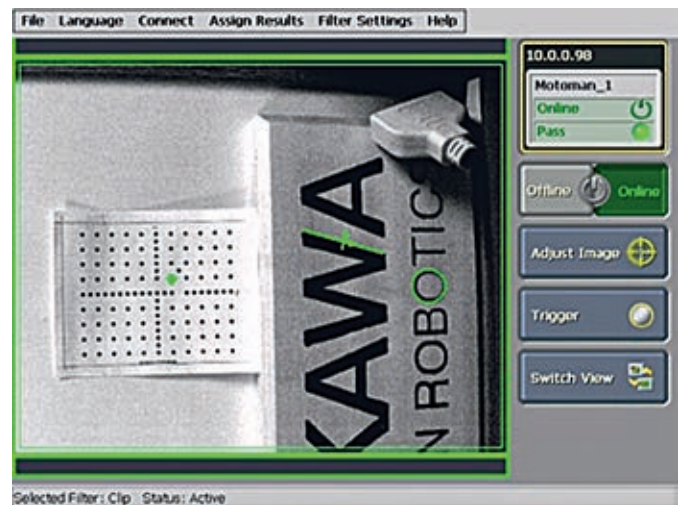
- Monitor and change on-line camera status
- Display pass/fail status
- Auto Display most recent camera image
- Display graphic overlays on captured image
- Calibrate camera using pendant
- Teaching of vision application

Communication:

- DX100, DX200 and FS100 controllers communicate directly with MotoSight2D camera over Ethernet

Vision features:

- Easy Builder and Spreadsheet
- Advanced option includes vision operator interface to view images from camera system
- High-resolution cameras available



Model	Technical data YASKAWA Cameras			
	Resolution	Processor speed	Frame/Second	Vision tools
MS100	800 x 600	1 x Base model	102	Limited Tool Set Pattern, Edge, Blob, Circle, Curve, Histogram, Geometry, Image Filters, Standard Calibration (9-Points)
MS200	800 x 600	3 x Base model	102	Full Tool Set Pattern, Edge, Blob, Circle, Curve, Histogram, Geometry, Image Filters, Standard Calibration (9-Points) PatMax (Geometric pattern matching technology), Advanced Calibration (non-linear calibration), and caliper tool, OCR, OCV; 2D Matix and Barcode reading
MS300	1280 x 1024	6 x Base model	60	High Resolution & Full Tool Set Pattern, Edge, Blob, Circle, Curve, Histogram, Geometry, Image Filters, Standard Calibration (9-Points) PatMax (Geometric pattern matching technology), Advanced Calibration (non-linear calibration), and caliper tool, OCR, OCV; 2D Matix and Barcode reading

Fieldbus Systems

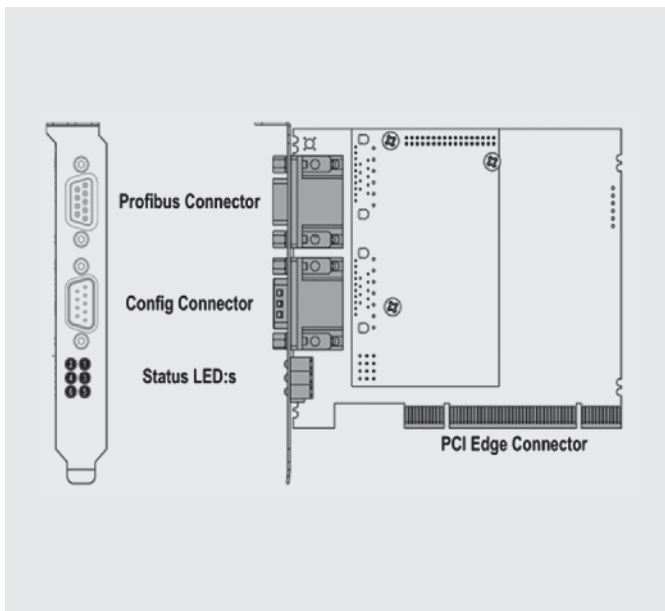


Overview Fieldbus Systems

DX200

SAP- No.	SAP text	Card- name	Bustype	Functionality					Note
				"Master"	"Slave"	Safety	GSDML/ GSD/EDS/ etc.	Configura- tion tool	
103829	Board Profibus DPV1 Master (NX/DX)	AB3602	Profibus	Master	—	—	available*	NetTool for Profibus	* needed for configuration
103830	Board Profibus DPV1 Slave (NX/DX)	AB3601	Profibus	—	Slave	—	available	Teachbox	—
143615	Board DeviceNet Slave (PCI)	AB3603	DeviceNet	—	Adapter	—	available	Teachbox	—
147796	Board EtherNet IP Adapter/Slave (PCI)	AB3606	EtherNet IP	—	Adapter	—	—	Webinterface; IP Config*	* needed for first adjustment of IP, can be downloaded from Anybus-Homepage
149142	Board DeviceNet Master (PCI)	AB3604	DeviceNet	Scanner	—	—	available*	NetTool for DeviceNet	* needed for configuration
150202	Board EtherNet IP Master AB3607	AB3607	EtherNet IP	Scanner	—	—	—	Webinterface; IP Config*	* needed for first adjustment of IP, can be downloaded from Anybus-Homepage
150963	Board ProfiNet Slave (Molex)	PCU-ETHIOPN	ProfiNet	—	Device*	—	automatically created by conf. tool	Appicom IO	* Controller/Device Function configured by Conf. tool; HW is identic
150964	Board ProfiNet Master (Molex) + CD	PCU-ETHIOPN	ProfiNet	Controller*	—	—	—	Appicom IO	* Controller/Device Function configured by Conf. tool; HW is identic
166959	Board EtherCat PCI-Card, Slave AB3617	AB3717	EtherCat	—	Slave	—	available	Teachbox	—
169302	Function DX200 EtherNet IP – CPU Board	—	EtherNet IP	Master*	Slave*	—	generated by DX	Teachbox	* both function can be used simultaneously
163798	Board Profi Net Master Slave (PCI) + Safety	CP1616	ProfiNet	Controller*	Device*	optional*	available	Step7, Teachbox	* Can be used as controller and device (Safe and/or none safe simultaneously). IP of controller is similar and port of internal hub is not assigned to both functions. Therefore no separation of network part for controller and device function. If physically separation requested, a second card is needed.
174014	Board Fieldbus Powerlink* Slave (PCI)	PL-IB 300	Powerlink	—	Controlled Node	—	available	Teachbox	* Do NOT confuse PowerLink (= fieldbus) with PowerLAN (= LAN over Power Supply Network) or Power over Ethernet (= Power supply over LAN-cable). A Managing Node (Master) can control up to 240 Controlled Nodes.

Board Profibus DPV1 Master



- PCI Profibus-DP/DPV1-Master card from HMS
- Electrical divided RS-485 profibus interface
- Up to 240 byte input- and 240 byte output-data
- Supports complete range of profibus baud rate from 9,6 kbit/s up to 12 Mbit

Technical parameters

- DX 200 controller with SW-Version 1.10-00 or higher
- PCI card

Included components

- Manual

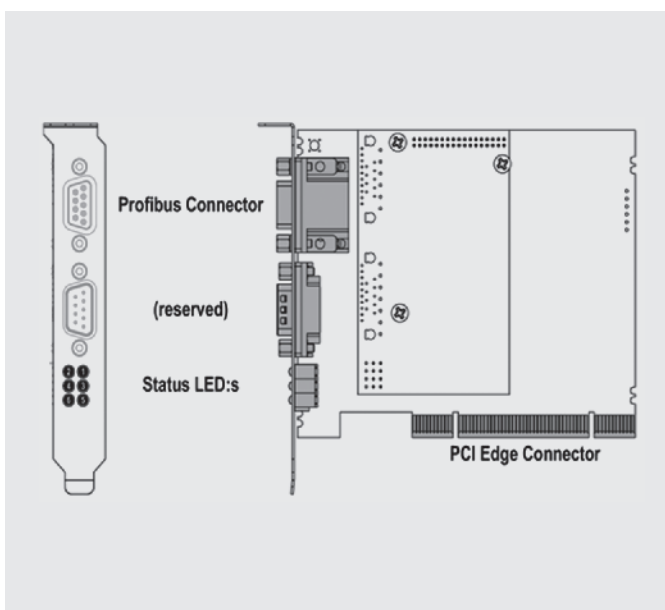
Components that are required in addition

- Profibus configuration-sw „Net Tool“ (103831)

Optional components

- None

Board Profibus DPV1 Slave



- PCI Profibus-DP/DPV1-Slave card from HMS
- Electrical divided RS-485 profibus interface
- Up to 240 byte input- and 240 byte output-data
- Supports complete range of profibus baud rate from 9,6 kbit/s up to 12 Mbit

Technical parameters

- DX 200 controller with SW-Version 1.10-00 or higher
- PCI card

Included components

- Manual

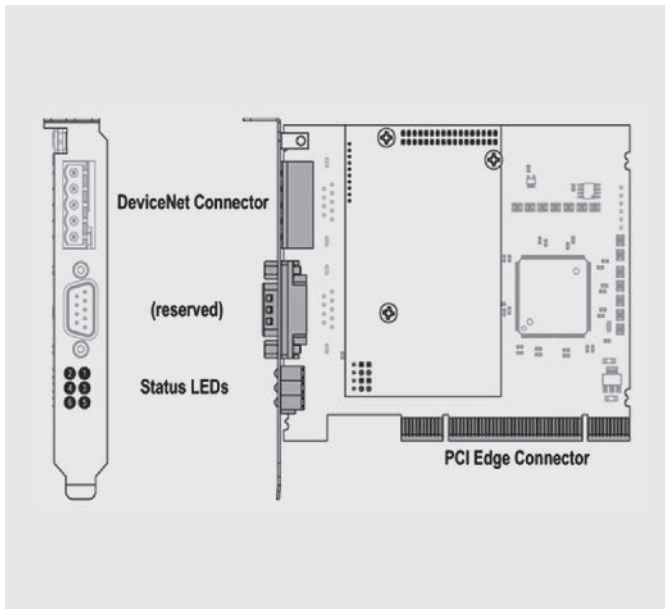
Components that are required in addition

- None

Optional components

- None

Board DeviceNet Slave (PCI)



- PCI Profibus-DP/DPV1-Master card from HMS
- Electrical divided RS-485 profibus interface
- Up to 240 byte input- and 240 byte output-data
- Supports complete range of profibus baud rate from 9,6 kbit/s up to 12 Mbit

Technical parameters

- DX 200 controller with SW-Version 1.10-00 or higher
- PCI card

Included components

- Manual

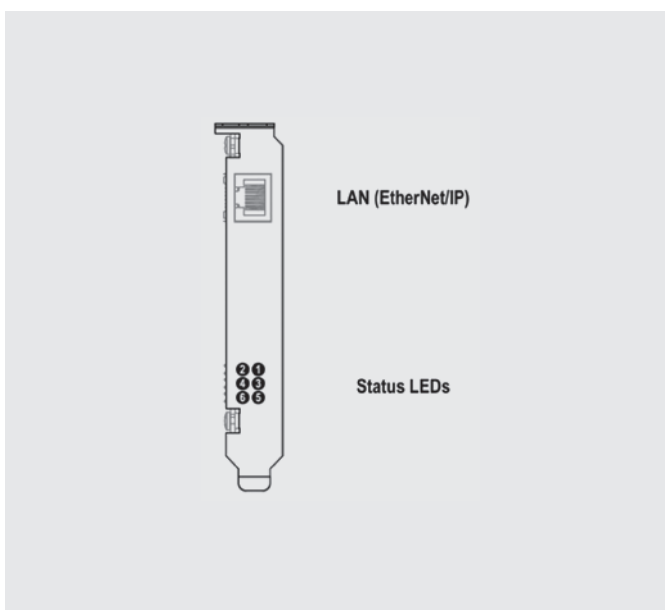
Components that are required in addition

- None

Optional components

- None

Board EtherNet IP Adapter/Slave (PCI)



- PCI EtherNet adapter card from HMS
- Complete EtherNet/IP adapter (slave) interface
- Baud rate: 10/100 MBit/s
- EtherNet/IP level 2 I/O server
- Transformer isolated Ethernet interface
- Modbus/TCP server/slave functionality Modbus
- Up to 255 bytes input and 255 bytes output data

Technical parameters

- DX 200 controller with SW-Version 1.10-00 or higher
- PCI card

Included components

- Manual

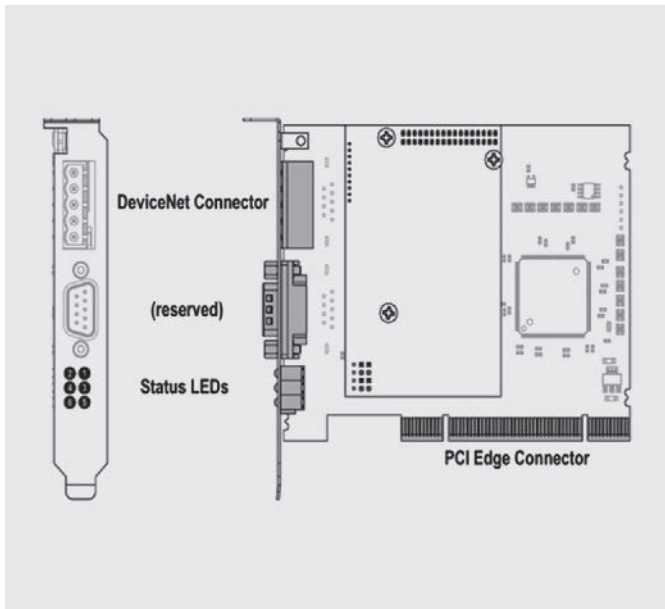
Components that are required in addition

- SW-Tool "Anybus IP Config"
(free; HMS- homepage „www.anybus.com")

Optional components

- None

Board DeviceNet Master (PCI)



- PCI DeviceNet Scanner card from HMS
- Complete DeviceNet 2.0 scanner implementation according to ODVA
- Group 2 Client/Server/UCMM support
- Baud rate: 125-500 kbit/s
- Optically isolated DeviceNet interface
- Up to 255 bytes input and 255 bytes output data
- Controls up to 63 DeviceNet adapters
- Supports FLASH field upgrades
- Configuration via Anybus Nettool or RSNetworkx

Technical parameters

- DX 200 controller with SW-Version 1.10-00 or higher
- PCI card

Included components

- Manual

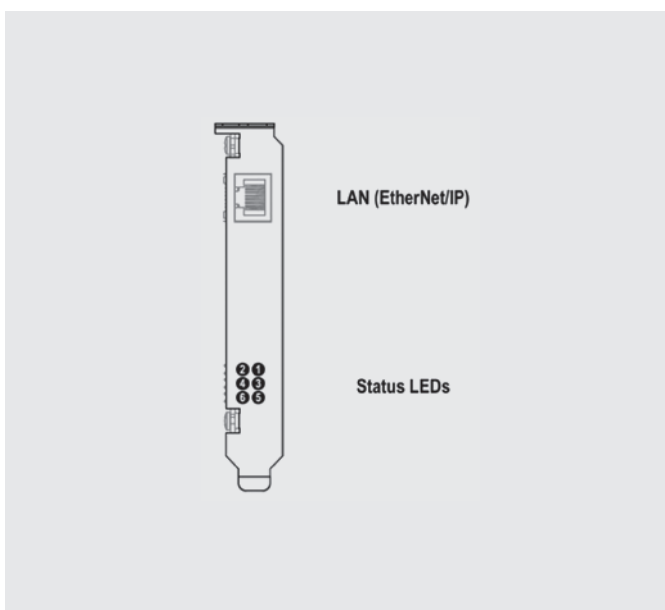
Components that are required in addition

- DeviceNet configuration-sw "Net Tool" and adapter (103838)

Optional components

- None

Board EtherNetIP Master AB3607



- PCI Ethernet scanner card from HMS
- Complete EtherNet/IP scanner (master)" interface
- Dual Port (DPRAM) parallel interface
- Baud rate: 10/100 MBit/s
- EtherNet/IP level 4 I/O client - ODVA certified
- Transformer isolated Ethernet interface
- Up to 255 bytes input and 255 bytes output data

Technical parameters

- DX 200 controller with SW-Version 1.10-00 or higher
- PCI card

Included components

- Manual

Components that are required in addition

- SW-Tool "Anybus IP Config" (free; HMS- homepage „www.anybus.com“)

Optional components

- None

Board ProfiNet Slave (Molex)



- PCI ProfiNet-device card from Molex
- Ethernet port IEEE 802.3 for industrial applications
- RJ45 ethernet interface
- Speed: 10/100 Mbps

Technical parameters

- DX 200 controller with SW-Version 1.10-00 or higher
- PCI card

Included components

- Manual

Components that are required in addition

- None

Optional components

- None

Board ProfiNet Master (Molex) + CD



- PCI ProfiNet-controller card from Molex
- Ethernet port IEEE 802.3 for industrial applications
- RJ45 ethernet interface
- Speed: 10/100 Mbps
- Up to 127 simultaneous connected devices

Technical parameters

- DX 200 controller with SW-Version 1.10-00 or higher
- PCI card

Included components

- Manual

Components that are required in addition

- None

Optional components

- None

Board EtherCat PCI-Card, Slave AB3617



- 2-port Ethernet with 100 Mbit / s
- EtherCAT slave functions according to DS 301 V4.02
- Max. 512 bytes of cyclic input and output data (PDO)
- Max. 2,048 bytes acyclic input and output data (SDO)

Technical parameters

- DX 200 controller with SW-Version 1.20-00 or higher
- PCI card

Included components

- Manual

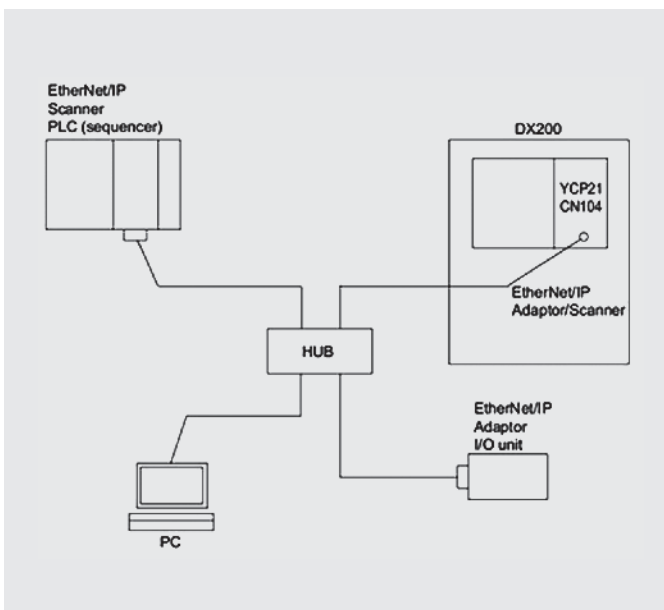
Components that are required in addition

- None

Optional components

- None

Function DX200 EtherNet IP – CPU Board



- Onboard Ethernet/IP function (Port CN104)
- Scanner (master) and adaptor (slave) functionality
- 10 Mbit/s /100 Mbit/s (automatically detected during startup)
- Max. 505 bytes input-data and max. 505 bytes output-data
- No additional hardware for Ethernet/IP communication needed

Technical parameters

- DX 200 controller with SW-Version 1.10-00 or higher

Included components

- Parameter
- Manual

Components that are required in addition

- None

Optional components

- None

Board CP1616 Profinet Master, Slave & Safety



- ProfiNet IO-Controller (Master)
- ProfiNet IO-Device (Slave)
- ProfiNet safety - PROFISafe (Slave)
- 64 Safe inputs/64 Safe outputs according to the black channel concept
- All functions can be used simultaneously
- ProfiNet based bus system

Technical parameters

- DX 200 controller with SW-Version 1.71.20A-00 or higher
- PCI card

Included components

- Parameter
- Manual

Components that are required in addition

- None

Optional components

- None

Board Fieldbus Powerlink Slave (PCI)



- 2x RJ4 Ethernet (integrated Hub)
- Powerlink Controlled Node function
- Up to 504 Byte I/O data

Technical parameters

- DX 200 controller with SW-Version 1.71-00 or higher
- PCI card

Included components

- Manual

Components that are required in addition

- None

Optional components

- None

The background of the image features a white, inverted triangle pointing downwards, centered on a blue background. The blue background is composed of several overlapping, semi-transparent blue triangles of varying shades, creating a geometric, layered effect.

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