MOBILE ROBOT
SERIES ZIMO2000

▶ PRODUCT ADVANTAGES

- **Shortage of skilled workers? No problem!**

  Make up for staff shortages at short notice.

- **Immediately ready for production**

  Ready-made function blocks facilitate commissioning and use.

- **Flexible with various robots**

  Compatible with a wide range of robot types. Collaborative and industrial.

- **Worldwide service and support**

  Support where you need it thanks to remote maintenance.

- **Fast return on investmentInvestment pays for itself after just 1.5 years.**

- **Infinite possibilities**

  Experienced programmers have the opportunity to go deeper. This means that the system can be expanded to include every conceivable function and interface.

▶ SERIES CHARACTERISTICS

- Ideal for small and varying batch sizes
- Increased productivity
- Flexible use
- Optimized production sequences
- Customizable
- Fast return on investment (ROI)

▶ BENEFITS IN DETAIL

1. **Basic module**
2. **Ready-to-start programming with Zimmer HMI + control panel**
3. **Compatible robots**
4. **End effectors**
5. **Options**

▶ BASE MODULES IN COMPARISON

CE-CERTIFICATION POSSIBLE*

EASY AUTOMATION (SERIES ZIMO2000) WHAT IS INCLUDED

BASE MODULE

- Base frame on four lifting rollers with locking feet
- Tabletop fully finished to customer specifications
- Control cabinet including fan / ventilation grille
- Prepared interface (pneumatically/electrically)
- Basic electrical equipment
- Status display (LED strip)
- Docking bar with "present" query
- Integrated brackets for accessories

ENGINEERING

- Conformity assessment procedure with corresponding certification
- *Certification possible with full integration by the Zimmer Group

FULL SERVICE

- Integration and commissioning possible
- Remote maintenance
- Comprehensive services

READY-TO-START PROGRAMMING WITH ZIMMER HMI + CONTROL PANEL

- Intuitive controls
- No programming knowledge required

ROBOT

- Compatible with a wide range of robot manufacturers

COMPLETE END EFFECTOR PORTFOLIO (CONFIGURABLE)

- Gripping and vacuum components, MATCH ecosystem, tool changers, axis compensators, collision protection, adapter plates, sensors and accessories, preconfigured robot sets
- Pneumatic, electric, vacuum, IO-Link

OPTIONS (CONFIGURABLE)

- Safety scanner
- Storage station for MATCH components
- Interfaces (Digital Safety I/O, Euromap 67, passive distributor, IO-Link, pneumatics)
- SLC rack
- Additional docking bar

PLATFORM KIT (SERIES ZIMO1000) WHAT IS INCLUDED?

BASE MODULE

- Base frame on four lifting rollers with locking feet
- Tabletop partially machined
- Control cabinet including fan / ventilation grille
- Prepared interface (pneumatically/electrically)
- Basic electrical equipment
- Status display (LED strip)
- Docking bar with "present" query
- Integrated brackets for accessories

ENGINEERING

- For checking the integration of new robot models, for example

SERVICE

- For mechanics
- When purchasing the PLC, support at the control level is available as an option (excluding robot programming)

CUSTOMER PROGRAMMING WITH THE SUPPORT OF ZIMMER SOFTWARE PACKAGES

- ZiMo PLC + PLC modules for easy integration of ZiMo options and the Zimmer Group portfolio
- Zimmer Comfort Apps, Zimmer GuideZ

ROBOT

- Compatible with almost all robot manufacturers

COMPLETE END EFFECTOR PORTFOLIO (CONFIGURABLE)

- Gripping and vacuum components, MATCH ecosystem, tool changers, axis compensators, collision protection, adapter plates, sensors and accessories, preconfigured robot sets
- Pneumatic, electric, vacuum, IO-Link

OPTIONS (CONFIGURABLE)

- Safety scanner
- Storage station for MATCH components
- Interfaces (Digital Safety I/O, Euromap 67, passive distributor, IO-Link, pneumatics)
- SLC rack
- Additional docking bar

MOBILE ROBOT
SERIES ZIMO2000

▶ INCLUDED IN CONFIGURATION

Base module

Zimmer HMI

▶ OPTIONS

EWON Cosy

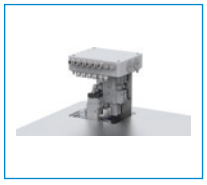
MATCH storage station

SICK safety scanner

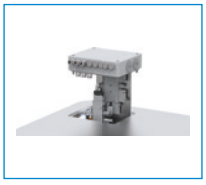
Euromap 67

EtherCAT

Passive distributor



Pneumatics with safety



Pneumatics without safety

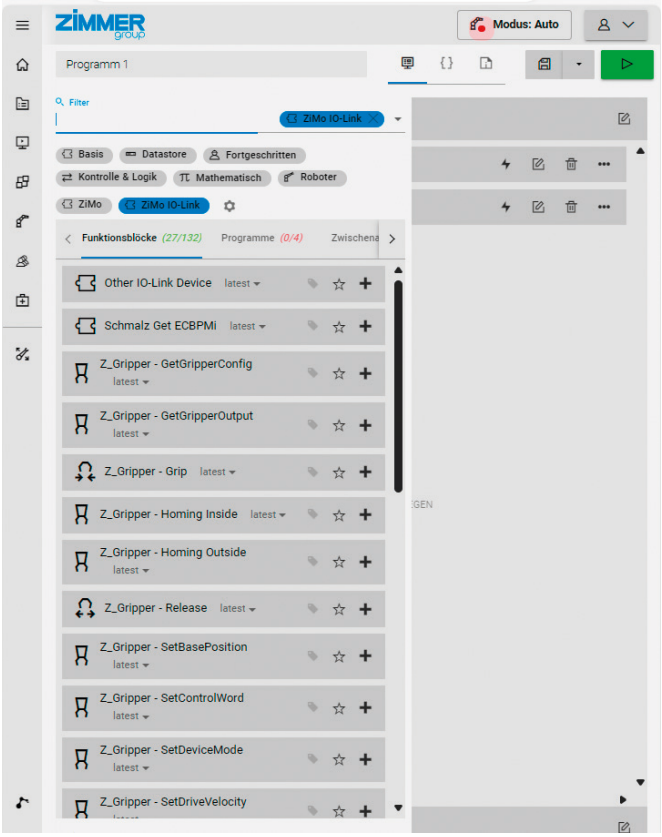
Digital safety I/O (32 I/O)

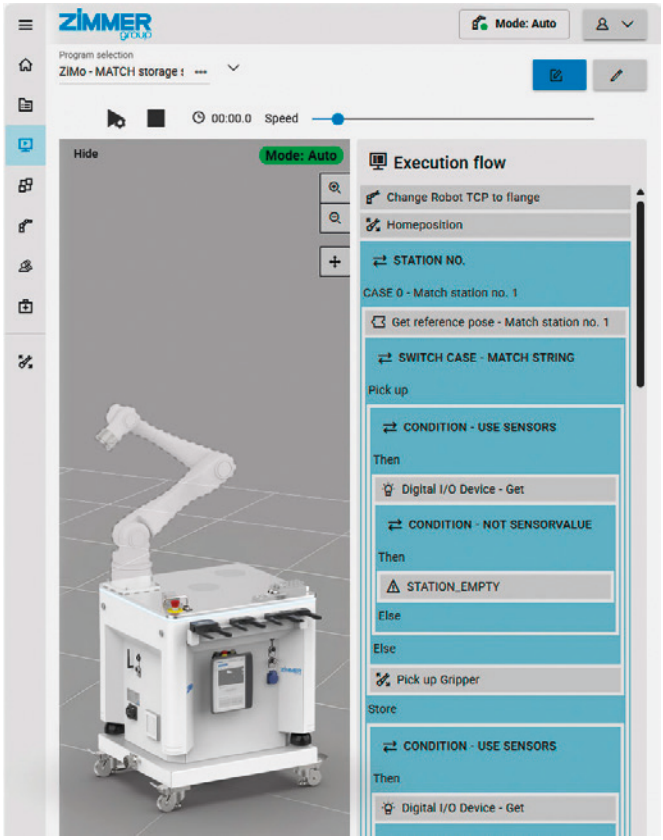
IO-Link

Docking bar

Storage for small load carrier (SLC)

SOFTWARE





SOFTWARE ADVANTAGES

Intuitive operation

The innovative web-based user interface can be operated from anywhere in a short space of time.

No programming knowledge necessary

All procedures can be configured intuitively using simple gestures on the UI. The system automatically checks which function blocks fit together.

Wide selection of robots

The system can control a large number of common robot manufacturers and types.

Expandable

The Zimmer Group's entire product portfolio is available as an option.

Simulation via digital twin

New procedures can be tested in advance from anywhere in an integrated simulation.

Short commissioning time

The first cycle is ready in less than 30 minutes after switching on.

Store

All available functions can be used directly from the integrated store. The store in the system grows with each new component.

Expandable for experienced programmers

Experienced programmers have the opportunity to go deeper. This means that the system can be expanded to include every conceivable function and interface.

Always up to date

On request, the device always receives the latest updates and can therefore benefit from all newly developed functions.

Collaborative or cooperative

Whether human or machine, the flexibility of the robots means that both worlds can be served.

MOBILE ROBOT
SERIES ZIMO2000

▶ COMPATIBLE ROBOTS


IRB 1100-4/0.475


IRB 1100-4/0.58


IRB 1200-5/0.9


IRB 1200-7/0.7


IRB 1300-11/0.9


GoFa 5


GoFa 10

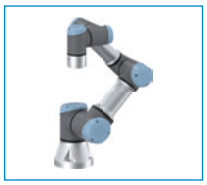

GoFa 12

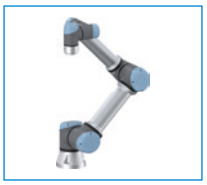

CRX-5iA

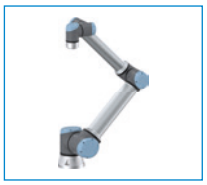

CRX-10iA


CRX-10iA/L

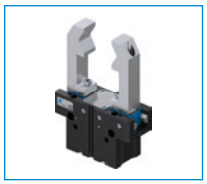

CRX-20iA/L


UR3e

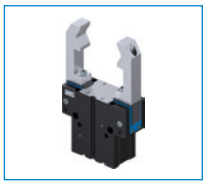

UR5e

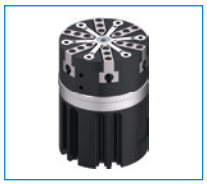

UR10e

▶ END EFFECTORS


2-Jaw Parallel Grippers


3-Jaw Concentric Grippers


2-Jaw Angular Grippers


Grippers for Specific Tasks

MATCH - Grippers

MATCH - Robot module

MATCH - Angle flange


Tool Changers

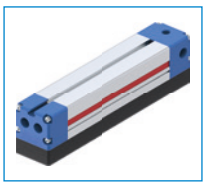

Rotary Distributors


Axis compensation modules


Crash protection


Robot sets


Magic Cups + Grippers


Vacuum gripping systems


Vacuum generators


Smart Cups + Smart Lock

Other end effectors

▶ TECHNICAL DATA - BASIC MODULE

Order no.	Base module	Basic module with max. options
Enveloping installation space (LxWxH) [mm]	720x920x933	885x1065x2200
Weight [kg]	305	350-415

▶ TECHNICAL DATA – CONNECTIONS AND CONTROL SYSTEM

Order no.	ZIMO2000-213757-A
Electrical connection	Plug CEE 16 A, 400V, 5-pole
Pneumatic connection	Coupling socket NW7
Operating temperature [°C]	+5 ... +40
Control system (PLC)	Beckhoff
Control system visualization	Zimmer HMI
Certifications	LABS / REACH / RoHS

▶ TECHNICAL DATA – INTERFACE OPTIONS

Order no.	Euromap 67	EtherCAT	Passive distributor	Pneumatics with safety	Pneumatics without safety	Digital safety I/O (32 I/O)	IO-Link
Injection molding machine	yes						
General machine interface		Yes				Yes	
Grippers			Yes	Yes	Yes		Yes
Conveyor belt			Yes	Yes	Yes	Yes	
Other external peripheral equipment		Yes	Yes	Yes	Yes	Yes	Yes

▶ TECHNICAL DATA – MECHANICAL OPTIONS

Order no.	SICK safety scanner
Performance level	d
Protective field range (max. usable) [m]	7.5
Configurable protective field	Yes
Detection angle per scanner [°]	275
Detection plane	2D
Monitoring cases [Quantity]	8
Shutdown paths [Quantity]	4

Order no.	MATCH storage station
Dimensions (WxDxH) [mm]	610x165x95
Locking force [N]	40
Release force [N]	20
Electrical connection	4xM8, 3-pin, A-coded, pluggable
Mechanical connection	can be hooked in
Compatible with	LWR50L
Integrated end effector query	Yes
Weight [kg]	0.2

Order no.	Docking bar
Dimensions (WxDxH) [mm]	780x65x20
Sensors	Coded magnetic switch, "ZiMo present" query
Mounting type	Doweling on the floor
Positioning accuracy +/- [mm]	2

Order no.	Storage for small load carrier (SLC)
Dimensions (WxDxH) [mm]	615x215x113
Storage surface [mm]	200x600
Load capacity [kg]	30

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▶ TECHNICAL DATA – ROBOT

Order no.	GoFa 5	GoFa 10	GoFa 12
Robot manufacturer	ABB	ABB	ABB
Robot series	CRB 15000 GoFa	CRB 15000 GoFa	CRB 15000 GoFa
Robot controller	OmniCore C30	OmniCore C30	OmniCore C30
Load capacity [kg]	5	10	12
Range [mm]	950	1520	1270
Functional safety	Performance level PL d of category 3 (in accordance with EN ISO 13849)	Performance level PL d of category 3 (in accordance with EN ISO 13849)	Performance level PL d of category 3 (in accordance with EN ISO 13849)
TCP speed max. [m/s]	2.2	2.0	2.0
Positioning accuracy +/- [mm]	0,02	0,02	0,02
Robot flange	ISO 9409-1-50-4-M6	ISO 9409-1-50-4-M6	ISO 9409-1-50-4-M6

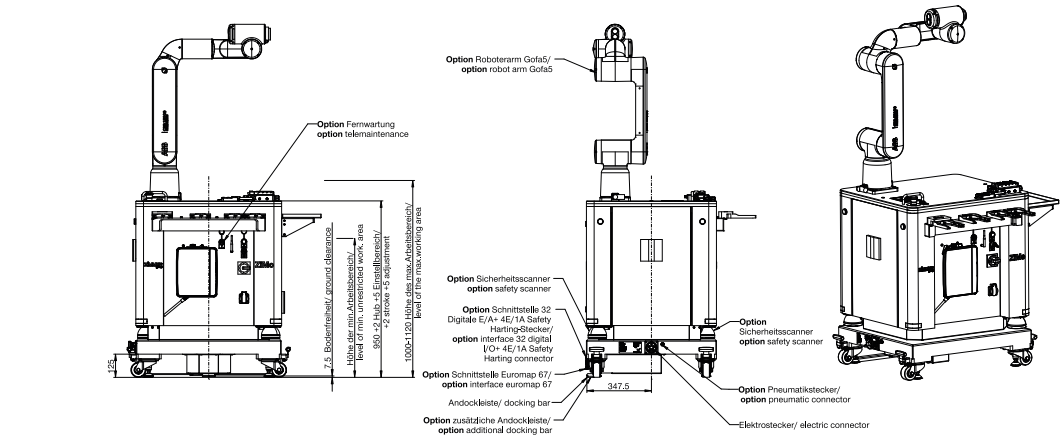
Order no.	IRB 1100-4/0.475	IRB 1100-4/0.58	IRB 1200-5/0.9	IRB 1200-7/0.7	IRB 1300-11/0.9
Robot manufacturer	ABB	ABB	ABB	ABB	ABB
Robot series	IRB 1100	IRB 1100	IRB 1200	IRB 1200	IRB 1300
Robot controller	OmniCore C30	OmniCore C30	OmniCore C30	OmniCore C30	OmniCore C30
Load capacity [kg]	4	4	5	7	11
Range [mm]	475	580	900	700	900
Functional safety	Safety certified in accordance with EN ISO 10218-1:2011	Safety certified in accordance with EN ISO 10218-1:2011	Safety certified in accordance with EN ISO 10218-1:2011	Safety certified in accordance with EN ISO 10218-1:2011	Safety certified in accordance with EN ISO 10218-1:2011
Positioning accuracy +/- [mm]	0,01	0,01	0,025	0,02	0,02
Robot flange	ISO 9409-1-31.5-4-M5	ISO 9409-1-31.5-4-M5	ISO 9409-1-31.5-4-M5	ISO 9409-1-31.5-4-M5	ISO 9409-1-40-4-M6

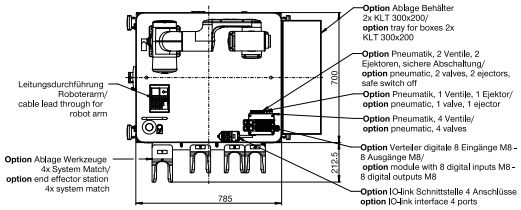
Order no.	UR3e	UR5e	UR10e
Robot manufacturer	Universal Robots	Universal Robots	Universal Robots
Robot series	e	e	e
Robot controller	OEM Control Box	OEM Control Box	OEM Control Box
Load capacity [kg]	3	5	12.5
Range [mm]	500	850	1300
Functional safety	Performance level PL d of category 3 (in accordance with EN ISO 13849)	Performance level PL d of category 3 (in accordance with EN ISO 13849)	Performance level PL d of category 3 (in accordance with EN ISO 13849)
TCP speed max. [m/s]	1.0	1.0	1.0
Positioning accuracy +/- [mm]	0,03	0,03	0,03
Robot flange	ISO 9409-1-50-4-M6	ISO 9409-1-50-4-M6	ISO 9409-1-50-4-M6

Order no.	CRX-5iA	CRX-10iA	CRX-10iA/L	CRX-20iA/L
Robot manufacturer	FANUC	FANUC	FANUC	FANUC
Robot series	CRX	CRX	CRX	CRX
Robot controller	R-30iB mini plus	R-30iB mini plus	R-30iB mini plus	R-30iB Plus
Load capacity [kg]	5	10	10	20
Range [mm]	994	1249	1418	1418
Functional safety	EN ISO 13849-1, PLd category 3 and EN ISO 10218-1	EN ISO 13849-1, PLd category 3 and EN ISO 10218-1	EN ISO 13849-1, PLd category 3 and EN ISO 10218-1	EN ISO 13849-1, PLd category 3 and EN ISO 10218-1
TCP speed max. [m/s]	2	2	2	1
Positioning accuracy +/- [mm]	0,03	0,04	0,04	0,04
Robot flange	ISO 9409-1-50-4-M6	ISO 9409-1-50-4-M6	ISO 9409-1-50-4-M6	ISO 9409-1-50-4-M6

▶ TECHNICAL DRAWING

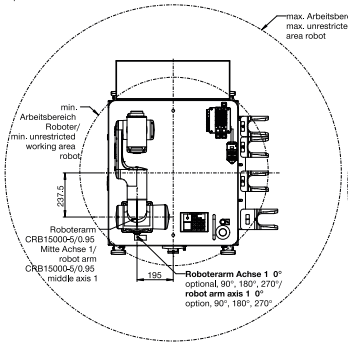
Darstellung beispielhaft mit Roboterarm CRB15000-5/0.95 optional andere Roboterarme - siehe Blatt 2/
description exemplified with robot arm CRB15000-5/0.95, optional other robot arms - shown on sheet 2



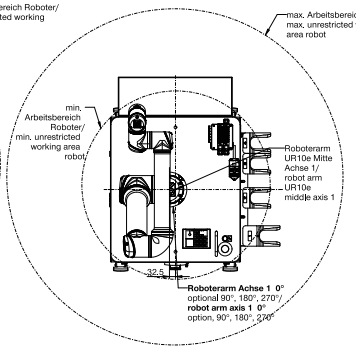


Elektroanschluss/ electric supply 400V 3+N+PE
Elektrostecker/ electric connector CEE 16A
Option Pneumatikanschluss/ option pneumatic supply 5,5-6 bar
Option Pneumatikstecker/ option pneumatic connector KD NW 7
Betriebstemperatur/ operating temperature +5..+40°C
Gewicht entsprechend Option/ weight according to option ca. 320 - 400 kg

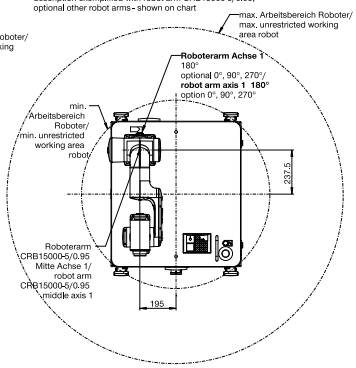
Roboter Position RA
Darstellung beispielhaft mit Roboterarm CRB15000-5/0.95,
optional andere Roboterarme - siehe Tabelle/
robot position RA
description exemplified with robot arm CRB15000-5/0.95,
optional other robot arms - shown on chart



Roboter Position RB
Darstellung beispielhaft mit Roboterarm UR10e,
optional andere Roboterarme - siehe Tabelle/
robot position RB
description exemplified with robot arm UR10e,
optional other robot arms - shown on chart



Roboter Position RC
Darstellung beispielhaft mit Roboterarm CRB15000-5/0.95,
optional andere Roboterarme - siehe Tabelle/
robot position RC
description exemplified with robot arm CRB15000-5/0.95,
optional other robot arms - shown on chart



CRX20-iA/L	1418	1418	225	225	810-1350
CRX10-iA/L	1418	1418	225	225	810-1350
CRX10-iA	1249	1249	225	225	760-1360
CRX5-iA	994	994	167	167	786-1275
UR16e	keine/ no option	keine/ no option	keine/ no option	keine/ no option	keine/ no option
UR12e	1300	1300	300	300	300-2230
UR10e	1300	1300	300	300	300-2230
UR7e	850	850	300	300	650-1800
UR5e	850	850	300	300	650-1800
UR3e	500	500	300	300	927-1427
IRB 1300-11/0.9	900	keine/ no option	266	keine/ no option	1277-1673
IRB 1200-9/0.7 Gen2	700	700	165	165	1202-1457
IRB 1200-9/0.9 Gen2	900	900	199	199	1167-1489
IRB 1200-7/0.7 Gen2	700	700	165	165	1202-1457
IRB 1200-7/0.7	700	700	160	160	1205-1477
IRB 1200-5/0.9 Gen2	900	900	199	199	1167-1489
IRB 1200-5/0.9	900	keine/ no option	194	keine/ no option	1167-1510
IRB 1100-4/0.58	580	580	185	185	1127-1427
IRB 1100-4/0.475	475	475	154	154	1067-1427
CRB15000-12/1.27	1270	1270	674	674	558
CRB15000-10/1.52	1520	1520	925	925	620
CRB15000-5/0.95	950	950	507	507	748
Roboterarm/ robot arm	**max. Arbeitsbereich Roboter Position RB Radius [mm] / max.working area robot position RB radius [mm]**	**max. Arbeitsbereich Roboter Position RA & RC Radius [mm] / max. working area robot position RA radius [mm]**	**Arbeitsbereich mit eventuellen Einschränkungen Roboter Pos. RB Radius [mm] / working area with possible restrictions Robot Pos. RB radius [mm]**	**Arbeitsbereich mit eventuellen Einschränkungen Roboter Pos. RA & RC Radius [mm] / working area with possible restrictions Robot Pos. RA & RC radius [mm]**	**Höhe Arbeitsbereich mit eventuellen Einschränkungen [mm] / height of the working area with possible restrictions [mm]**

Zur Ermittlung des Laserscannerfelds:
Not-Halt Abschaltzeit Steuerung: 0,19s
Not-Halt Abschaltzeit Roboterarm UR3e, UR5e,UR10e: 0,4s
Not-Halt Abschaltzeit Roboterarm UR7e, UR12e,UR16e: .....
Not-Halt Abschaltzeit Roboterarm CRB15000-5/0.95: 1,1s
Not-Halt Abschaltzeit Roboterarm CRB15000-10/1.52,
CRB15000-12/1.27: 1,2s
Not-Halt Abschaltzeit Roboterarm CRX-5iA: 1,2s
Not-Halt Abschaltzeit Roboterarm CRX-10iA, CRX-10iA/L: 1,3s
Not-Halt Abschaltzeit Roboterarm CRX-20iA/L: 1,6s
Not-Halt Abschaltzeit Roboterarm ABB IRB 1100-4/0.475,
ABB IRB 1100-4/0.58, ABB IRB 1200-5/0.9,
ABB IRB 1200-5/0.9 Gen2, ABB IRB 1200-7/0.7, ABB IRB
1200-7/0.7 Gen2, ABB IRB 1200-9/0.9 Gen2, ABB IRB 1200-9/0.7
Gen2, ABB IRB 1300-11/0.9 : 1s

For determination of the laser scanner field:
Emergency stop turn off time robot control system: 0,19s
Emergency stop turn off time robot UR3e, UR5e, UR10e: 0,4s
Emergency stop turn off time robot UR7e, UR12e, UR16e: .....
Emergency stop turn off time robot CRB15000-5/0.95: 1,1s
Emergency stop turn off time robot CRB15000-10/1.52,
CRB15000-12/1.27: 1,2s
Emergency stop turn off time robot CRX-5iA: 1,2s
Emergency stop turn off time robot CRX-10iA, CRX-10iA/L: 1,3s
Emergency stop turn off time robot CRX-20iA/L: 1,6s
Emergency stop turn off time robot ABB IRB 1100-4/0.475,
ABB IRB 1100-4/0.58, ABB IRB 1200-5/0.9,
ABB IRB 1200-5/0.9 Gen2, ABB IRB 1200-7/0.7, ABB IRB
1200-7/0.7 Gen2, ABB IRB 1200-9/0.9 Gen2, ABB IRB 1200-9/0.7
Gen2, ABB IRB 1300-11/0.9 : 1s