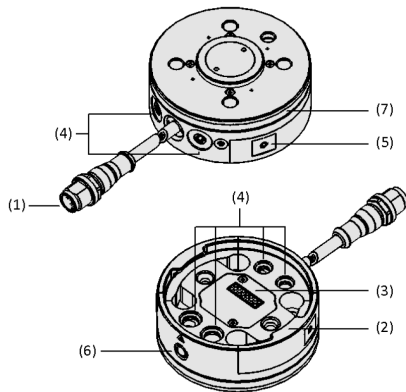


Quick-Change Module RMQC

Intelligent quick coupler for End-of-Arm Ecosystem MATCH



Quick-Change Module RMQC



System design Quick-Change Module RMQC



Quick-change module RMQC for manual gripper changes

Suitability for industry specific applications

Application

- Quick-change module for use in lightweight robotics (cobots) or on industrial robots with lift capacity of up to 25 kg
- Use within the End-of-Arm Ecosystem MATCH in combination with vacuum and mechanical grippers, assisted by digital services (e.g. setup wizard)
- Flexible use in human-robot collaboration (MRK environment) as well as in mobile robotics
- Automated processes such as pick & place, machine loading and unloading, order picking, packaging and palletizing as well as quality inspection

Design

- Connection cable for tool connection on the robot side (1)
- Integrated locking mechanism for quick-change function in connection with grippers of the MATCH platform (anti-rotating) (2)
- Hot-plug capable pin field for transmission of load and signal current (3)
- Four internal fluid channels, two of which are accessible from the side, for supplying the connected gripper with compressed air or vacuum (4)
- Connect display and Freedrive function (6) and LED ring (optional) (7)
- Mounting option for cable strain relief / cable holder (5)

Product highlights

- Internal fluid channels facilitate tubing with minimal interference contours
- Automated changing without additional drive for the realization of fully automated applications, e.g. in mobile robotics
- Manual change with one-hand function within seconds thanks to compact design and low weight
- Changing the end effector under voltage during operation (hot-plug function) reduces the control effort while at the same time ensuring a long service life
- High process reliability due to integrated anti-rotation guard as well as optical and digital connect signal

Quick-Change Module RMQC

Intelligent quick coupler for End-of-Arm Ecosystem MATCH

Designation code Quick-Change Module RMQC

RMQC 1	–	50 2	–	UNI 3	–	IOL 4	–	LED-B 5
FD 6	–	M12-5 7	–	MATCH 8				

1 – Abbreviated designation

Code	Version
RMQC	RMQC

2 – Pitch circle flange in mm

Code	Type
31.5	31.5
50	50

3 – Compatibility

Code	Version
ABB	ABB Robotics
DOOSAN	Doosan Robotics
FANUC	Fanuc
HANWHA	Hanwha
UR	Universal Robots
UNI	Universal

4 – Inputs/outputs

Code	Type
IOL	IO-Link
DIO	Digital I/O
RS485	RS485

5 – Display

Code	Type
LED-B	LED strip

6 – Additional function

Code	Type
FD	Freedrive function

7 – Connection electrical

Code	Connection
2xM8-3/4	2x M8, 3+4 pole
M12-5	M12, 5 pole
M12-12	M12, 12 pole
WB-M8-8	Angle connector M8, 8 pole
WS-M8-8	Angle plug M8, 8 pole

8 – Design

Code	Type
MATCH	MATCH

The RMQC quick-change module is supplied ready for connection.

Suitable vacuum generator must be ordered separately.

Ordering data Quick-Change Module RMQC

Type	Part no.
RMQC 31.5 ABB DIO M12-12 PNP MATCH	10.08.09.00021
RMQC 50 ABB DIO 2xM8-3/4 PNP MATCH	10.08.09.00016
RMQC 50 DOOSAN DIO WS-M8-8 PNP MATCH	10.08.09.00003
RMQC 50 ELITE DIO FD HR10A-10P MATCH	10.08.09.00040
RMQC 50 FANUC DIO WB-M8-8 PNP MATCH	10.08.09.00005
RMQC 50 HANWHA DIO WB-M8-8 NPN MATCH	10.08.09.00002
RMQC 50 KUKA DIO LED PNP MATCH	10.08.09.00043
RMQC 50 NEU DIO WB-M8-8 PNP MATCH	10.08.09.00056
RMQC 50 NEU/KAW DIO WS-M12 PNP MATCH	10.08.09.00055
RMQC 50 SE DIO M8-8 NPN MATCH	10.08.09.00052
RMQC 50 TM DIO WS-M8-8 NPN MATCH	10.08.09.00004
RMQC 50 UNI DIO LED M8-8 PNP MATCH	10.08.09.00045
RMQC 50 URe DIO WB-M8-8 NPN MATCH	10.08.09.00001
RMQC 50 URe RS-485 WB-M8-8 MATCH	10.08.09.00010
RMQC 50 YAS DIO WB-M8-8 NPN MATCH	10.08.09.00037
RMQC 50 YAS DIO WB-M8-8 PNP MATCH	10.08.09.00036

Quick-Change Module RMQC

Intelligent quick coupler for End-of-Arm Ecosystem MATCH

Ordering data Accessories Quick-Change Module RMQC

Accessories		Part no.
CobotPump	ECBPI 12 24V-DC MATCH	10.03.01.00626
CobotPump	ECBPMi 24V-DC MATCH	10.03.01.00661
Ejector module MATCH	RECBi 24V-DC NO PXR-I 1C MATCH	10.02.03.00375
Ejector module MATCH	RECBi 24V-DC NO PXR-X 1C MATCH	10.02.03.00376
Ejector module MATCH	RECBi 24V-DC NC PXR-I 1C MATCH	10.02.03.00377
Ejector module MATCH	RECBi 24V-DC NC PXR-X 1C MATCH	10.02.03.00378
Ejector module MATCH	RECBi 24V-DC NO PXR-2 2C MATCH	10.02.03.00379
Ejector module MATCH	RECBi 24V-DC NC PXT-1 1C MATCH	10.02.03.00394
Ejector module MATCH	RECBi 24V-DC NC PXT-2 1C MATCH	10.02.03.00395
Ejector module MATCH	RECBi 24V-DC NO PXT-1 1C MATCH	10.02.03.00397
Ejector module MATCH	RECBi 24V-DC NO PXT-2 1C MATCH	10.02.03.00398
Ejector module MATCH	RECBi 24V-DC NC PXT-2 2C MATCH	10.02.03.00400
Ejector module MATCH	RECBi 24V-DC NC UNI 1C MATCH	10.02.03.00401
Ejector module MATCH	RECBi 24V-DC NO UNI 1C MATCH	10.02.03.00402
Ejector module MATCH	RECBi 24V-DC NC UNI 2C MATCH	10.02.03.00403
Ejector module MATCH	RECBi 24V-DC NO UNI 2C MATCH	10.02.03.00404
Ejector module MATCH	RECBi 24V-DC NO PXT-2 2C MATCH	10.02.03.00405
Ejector module MATCH	RECBi 24V-DC NO PXR-X 2C MATCH	10.02.03.00407
Ejector module MATCH	RECBi 24V-DC NC PXR-I 2C MATCH	10.02.03.00408
Ejector module MATCH	RECBi 24V-DC NC PXR-X 2C MATCH	10.02.03.00409

Accessories		Part no.
Storage station	STATION 150x110x22 MATCH	10.08.09.00013

Quick-Change Module RMQC

Intelligent quick coupler for End-of-Arm Ecosystem MATCH

Technical data Quick-Change Module RMQC

Type	for	Type	Electrical connection	Inputs / outputs	Construction	Shape	Type	Additional function	with
RMQC 31.5 ABB DIO M12-12 PNP MATCH	ABB Robotics	ABB IRB1100	Male connect M12, 12 pol	digital input / output	PNP switching	Fluid channel closed	-	-	EL-PNEU
RMQC 50 ABB DIO 2xM8-3/4 PNP MATCH	ABB Robotics	ABBGoFaCRB15000	2xConnect M8, 3+4 pol	digital input / output	PNP switching	Fluid channel closed	-	-	EL-PNEU
RMQC 50 DOOSAN DIO WS-M8-8 PNP MATCH	Doosan Robotics	M-/H-/A- Series	Elbow con M8, 8 pole	digital input / output	PNP switching	Fluid channel closed	-	Freedrive	EL-PNEU
RMQC 50 ELITE DIO FD HR10A-10P MATCH	ELITE Robots	EC-Series	Male Hirose HR10A-10P	digital input / output	NPN switching	Fluid channel closed	-	Freedrive	EL-PNEU
RMQC 50 FANUC DIO WB-M8-8 PNP MATCH	FANUC	CRX	Elb fem conn M8, 8 pol	digital input / output	PNP switching	Fluid channel closed	-	-	EL-PNEU
RMQC 50 HANWHA DIO WB-M8-8 NPN MATCH	HANWHA	HCR3/5/12	Elb fem conn M8, 8 pol	digital input / output	NPN switching	Fluid channel closed	-	-	EL-PNEU
RMQC 50 KUKA DIO LED PNP MATCH	KUKA	iisy 3, 11, 15	-	digital input / output	PNP switching	-	-	-	EL-PNEU
RMQC 50 NEU DIO WB-M8-8 PNP MATCH	Neura Robotics	Maira	Elb fem conn M8, 8 pol	digital input / output	PNP switching	Fluid channel closed	-	Freedrive	EL-PNEU
RMQC 50 NEU/ KAW DIO WS-M12 PNP MATCH	Neura Robotics / Kawasaki	Lara / CL	Elbow con M12, 12 pole	digital input / output	PNP switching	Fluid channel closed	-	Freedrive	EL-PNEU
RMQC 50 SE DIO M8-8 NPN MATCH	Schneider Electric	-	Male connect M8, 8 pole	digital input / output	NPN switching	Fluid channel closed	-	Freedrive	EL-PNEU
RMQC 50 TM DIO WS-M8-8 NPN MATCH	Techman	TM5	Elbow con M8, 8 pole	digital input / output	NPN switching	Fluid channel closed	-	-	EL-PNEU
RMQC 50 UNI DIO LED M8-8 PNP MATCH	Universal	-	Male connect M8, 8 pole	digital input / output	PNP switching	-	-	-	EL-PNEU
RMQC 50 UNI IOL LED M12-5 MATCH	Universal	ISO TK 50	Male connect M12, 5 pol	IO-Link	-	Fluid channel closed	-	-	EL-PNEU
RMQC 50 UNI IOL M12-5 MATCH	Universal	ISO TK 50	Male connect M12, 5 pol	IO-Link	-	Fluid channel closed	-	-	EL-PNEU
RMQC 50 URe DIO WB-M8-8 NPN MATCH	Universal Robots e	UR3e-16e	Elb fem conn M8, 8 pol	digital input / output	NPN switching	Fluid channel closed	-	Freedrive	EL-PNEU
RMQC 50 URe RS-485 WB-M8-8 MATCH	Universal Robots e	UR3-16	Elb fem conn M8, 8 pol	RS 485	-	Fluid channel closed	-	Freedrive	EL-PNEU
RMQC 50 YAS DIO WB-M8-8 NPN MATCH	Yaskawa	HC P-Version	Elb fem conn M8, 8 pol	digital input / output	NPN switching	Fluid channel closed	-	Freedrive	EL-PNEU

Quick-Change Module RMQC

Intelligent quick coupler for End-of-Arm Ecosystem MATCH

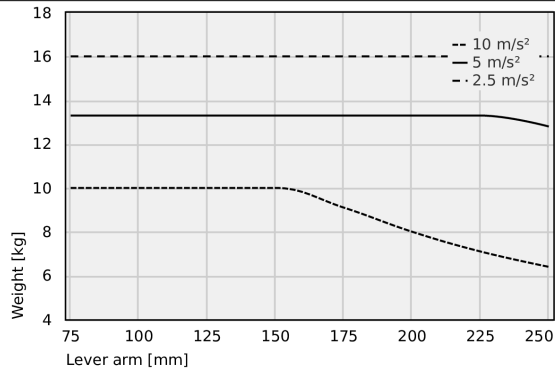
Type	for	Type	Electrical connection	Inputs / outputs	Construction	Shape	Type	Additional function	with
RMQC 50 YAS DIO WB-M8-8 PNP MATCH	Yaskawa	HC P-Version	Elb fem conn M8, 8 pol	digital input / output	PNP switching	Fluid channel closed	-	Freedrive	EL-PNEU

Type	Force axial (max) [N]	Moment (Y) [Nm]	Moment (radial) [Nm]	Axle offset max [mm]	Number of load cycles	Tightening force [N]	Dissolving power [N]	Operating temperature	Weight [g]
RMQC 31.5 ABB DIO M12-12 PNP MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	390.0
RMQC 50 ABB DIO 2xM8-3/4 PNP MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	270.0
RMQC 50 DOOSAN DIO WS-M8-8 PNP MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	250.0
RMQC 50 ELITE DIO FD HR10A-10P MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	293.0
RMQC 50 FANUC DIO WB-M8-8 PNP MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	260.0
RMQC 50 HANWHA DIO WB-M8-8 NPN MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	260.0
RMQC 50 KUKA DIO LED PNP MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	295.0
RMQC 50 NEU DIO WB-M8-8 PNP MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	260.0
RMQC 50 NEU/ KAW DIO WS- M12 PNP MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	260.0
RMQC 50 SE DIO M8-8 NPN MATCH	500	40	-	-	-	50	0	5 ... 60 °C	-
RMQC 50 TM DIO WS-M8-8 NPN MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	600.0
RMQC 50 UNI DIO LED M8-8 PNP MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	307.0
RMQC 50 URe DIO WB-M8-8 NPN MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	260.0
RMQC 50 URe RS-485 WB-M8-8 MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	390.0
RMQC 50 YAS DIO WB-M8-8 NPN MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	261.0
RMQC 50 YAS DIO WB-M8-8 PNP MATCH	500	40	-	1	100,000	50	0	5 ... 60 °C	261.0

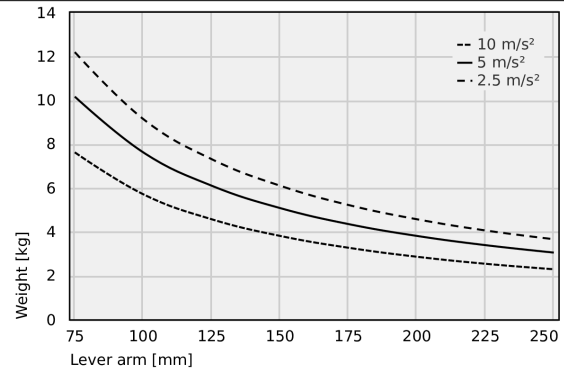
Quick-Change Module RMQC

Intelligent quick coupler for End-of-Arm Ecosystem MATCH

Performance data Quick-Change Module RMQC



Vertical design: max. handling weight as a function of acceleration and lever arm



Horizontal design: max. handling weight depending on acceleration and lever arm

Quick-Change Module RMQC

Intelligent quick coupler for End-of-Arm Ecosystem MATCH

Vertical design: max. handling weight as a function of acceleration and lever arm

	75	100	125	150	175	200	225	250
10 m/s ²	10	10	10	10	9.1	8	7.1	6.4
5 m/s ²	13.3	13.3	13.3	13.3	13.3	13.3	13.3	12.8
2.5 m/s ²	16	16	16	16	16	16	16	16

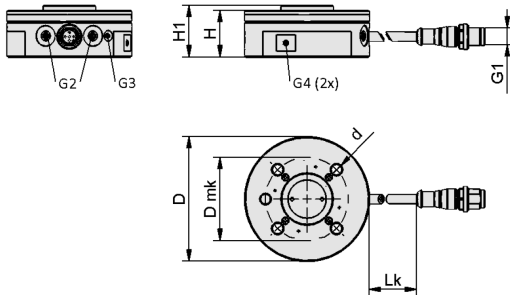
Horizontal design: max. handling weight depending on acceleration and lever arm

	75	100	125	150	175	200	225	250
10 m/s ²	7.62	5.71	4.57	3.81	3.27	2.86	2.54	2.29
5 m/s ²	10.16	7.62	6.10	5.08	4.35	3.81	3.39	3.05
2.5 m/s ²	12.19	9.14	7.31	6.10	5.22	4.57	4.06	3.66

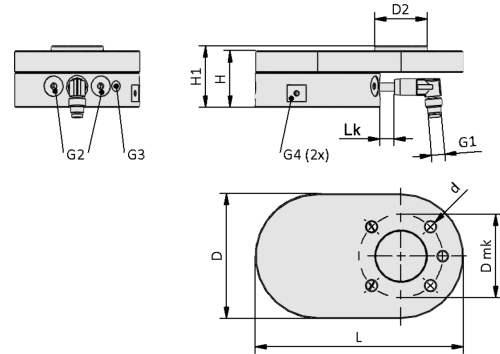
Quick-Change Module RMQC

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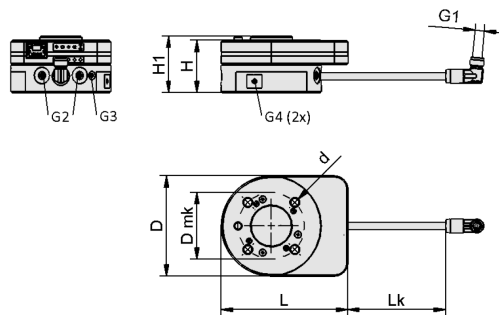
Design data Quick-Change Module RMQC



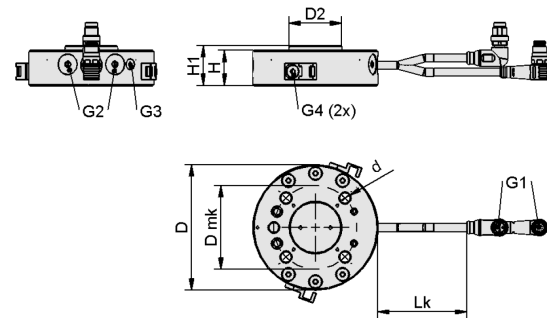
RMQC DIO, IOL



RMQC TM ROBOT



RMQC RS-485



RMQC ABB GoFa

Quick-Change Module RMQC

Intelligent quick coupler for End-of-Arm Ecosystem MATCH

Design data Quick-Change Module RMQC

Type	D [mm]	d [mm]	D2 [mm]	Dmk [mm]	G1	G2	G3	G4	H [mm]	H1 [mm]	L [mm]	Lk [mm]
RMQC 31.5 ABB DIO M12-12 PNP MATCH	75	5.3	20.0	32	M12-M	M7-F	M3-F	M4-F	33	36	-	450
RMQC 50 ABB DIO 2xM8-3/4 PNP MATCH	75	6.4	31.5	50	M8-M	M7-F	M3-F	M4-F	21	24	-	310
RMQC 50 DOOSAN DIO WS-M8-8 PNP MATCH	75	6.4	31.5	50	M8-M	M7-F	M3-F	M4-F	21	24	-	200
RMQC 50 ELITE DIO FD HR10A-10P MATCH	75	6.4	31.5	50	-	M7-F	M3-F	M4-F	21	24	-	180
RMQC 50 FANUC DIO WB-M8-8 PNP MATCH	75	6.4	31.5	50	M8-F	M7-F	M3-F	M4-F	21	24	-	200
RMQC 50 HANWHA DIO WB-M8-8 NPN MATCH	75	6.4	31.5	50	M8-F	M7-F	M3-F	M4-F	21	24	-	200
RMQC 50 KUKA DIO LED PNP MATCH	75	6.4	31.5	50	-	M7-F	M3-F	M4-F	21	24	-	150
RMQC 50 NEU DIO WB- M8-8 PNP MATCH	75	6.4	31.5	50	M12-F	M7-F	M3-F	M4-F	21	24	-	200
RMQC 50 NEU/KAW DIO WS-M12 PNP MATCH	75	6.4	31.5	50	M12-F	M7-F	M3-F	M4-F	21	24	-	200
RMQC 50 SE DIO M8-8 NPN MATCH	75	6.4	31.5	50	M8-F	M7-F	M3-F	M4-F	21	24	-	100
RMQC 50 TM DIO WS-M8-8 NPN MATCH	75	6.4	31.5	50	M8-M	M7-F	M3-F	M4-F	34	37	125	270
RMQC 50 UNI DIO LED M8-8 PNP MATCH	75	6.4	31.5	50	M8-M	M7-F	M3-F	M4-F	21	24	-	300
RMQC 50 URe DIO WB- M8-8 NPN MATCH	75	6.4	31.5	50	M8-F	M7-F	M3-F	M4-F	21	24	-	200
RMQC 50 UR RS-485 WB-M8-8 MATCH	75	6.4	31.5	50	M8-F	M7-F	M3-F	M4-F	39	42	95	200
RMQC 50 YAS DIO WB-M8-8 NPN MATCH	75	6.4	31.5	50	M8-F	M7-F	M3-F	M4-F	21	24	-	200

Quick-Change Module RMQC

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Type	D [mm]	d [mm]	D2 [mm]	Dmk [mm]	G1	G2	G3	G4	H [mm]	H1 [mm]	L [mm]	Lk [mm]
RMQC 50 YAS	75	6.4	31.5	50	M8-F	M7-F	M3-F	M4-F	21	24	-	200
DIO WB-M8-8												
PNP MATCH												