

IST-RM_QC-UR

07/2021



RM_QC-UR

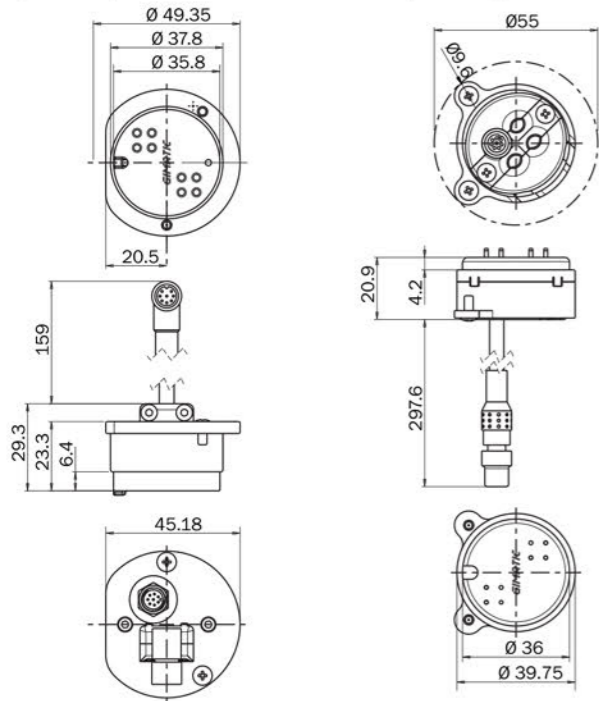
Electrical connection module for UR robots

Electrical connection module

- Electrical connection module for EQC20U quick changer
- 8 electrical spring connections
- 1 output with pre-wired cable.
- 3 possible types of connection.

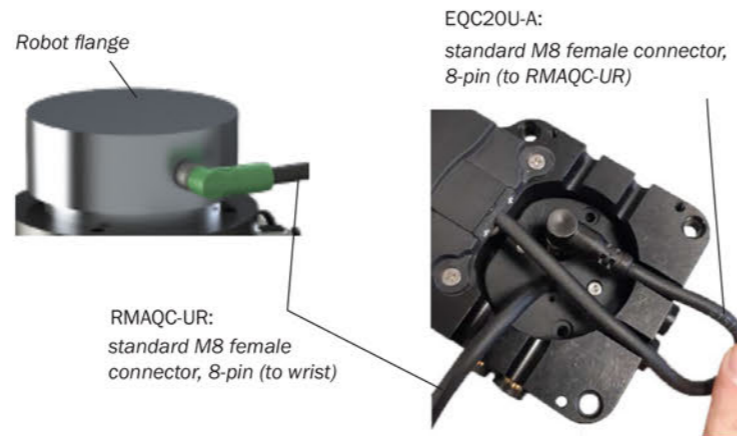
RMAQC-UR Quick# 7703

RMBQC-UR Quick# 7711



Solution 1: Single connection to the wrist

This solution is based on a single cable connected to the wrist that powers both the quick changer and the tool.

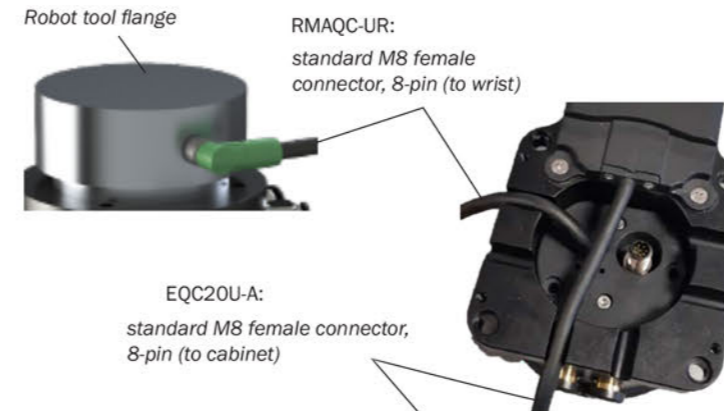


The following figure shows the wiring diagram of the connector placed at the wrist of the UR collaborative robots and at the output of the KIT-UR-EQC20.

UR wrist connection	EQC20U-A	RMBQC-UR
AI2	/	AI2 (White wire - pin 1)
AI3	/	AI3 (Brown wire - pin 2)
DI0	(Out closed PNP)	/
DI1	(Out open PNP)	/
PWR	(+24Vdc)	PWR (Grey wire - pin 5)
DO1	(EQC command NPN)	/
DO8	/	DO8 (Blu wire - pin 7)
GND	GND	GND (Red wire - pin 8)

Solution 2: EQC20U-A connected to the electric panel and RMAQC-UR connected to the wrist

This solution connects all the 8 pins of the wrist directly to the B-side of the quick changer, allowing the tools to have access to all wrist connections



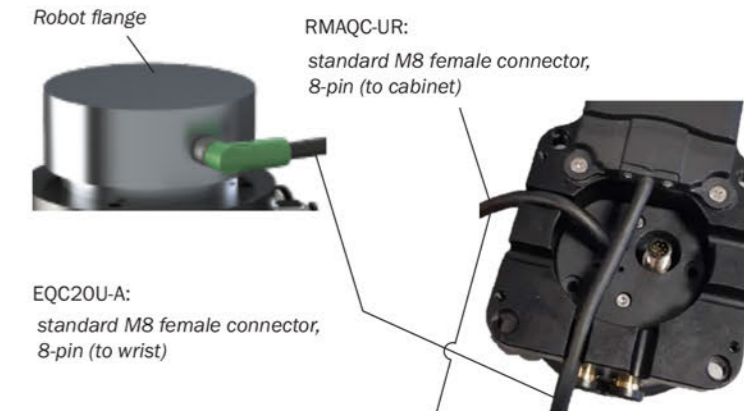
Digital Inputs		Digital Outputs	
24V	24V	0V	0V
DI0	DI4	DO0	DO4
24V	24V	0V	0V
24V	24V	0V	0V
DI1	DI5	DO1	DO5
24V	24V	0V	0V
DI2	DI6	DO2	DO6
24V	24V	0V	0V
DI3	DI7	DO3	DO7

M8 female connector	EQC20U-A
White wire - pin 1	/
Brown wire - pin 2	/
Green wire - pin 3	OUT CLOSED (PNP)
Yellow wire - pin 4	OUT OPEN (PNP)
Grey wire - pin 5	+24Vdc (Supply)
Pink wire - pin 6	IN OPEN/CLOSED (NPN)
Blue wire - pin 7	/
Red wire - pin 8	Gnd

UR wrist connection	RMAQC-UR
AI2	AI2 (White wire - pin 1)
AI3	AI3 (Brown wire - pin 2)
DI0	DI0 (Green wire - pin 3)
DI1	DI1 (Yellow wire - pin 4)
PWR	PWR (Grey wire - pin 5)
DO1	DO1 (Pink wire - pin 6)
DO8	DO8 (Blu wire - pin 7)
GND	GND (Red wire - pin 8)

Solution 3: RMAQC-UR connected to the electric panel and EQC20U-A connected to the wrist

This solution allows the quick changer to be powered from the robot wrist and the tool to be connected to the I/O of the cabinet.



Configurable Inputs		Configurable Outputs		Digital Inputs		Digital Outputs		Analog	
24V	24V	0V	0V	24V	24V	0V	0V	AG	
CI0	CI4	CO0	CO4	DI0	DI4	DO0	DO4	AI0	
24V	24V	0V	0V	24V	24V	0V	0V	AG	
CI1	CI5	CO1	CO5	DI1	DI5	DO1	DO5	AI1	
24V	24V	0V	0V	24V	24V	0V	0V	AG	
CI2	CI6	CO2	CO6	DI2	DI6	DO2	DO6	AO0	
24V	24V	0V	0V	24V	24V	0V	0V	AG	
CI3	CI7	CO3	CO7	DI3	DI7	DO3	DO7	AO1	

UR wrist connection	EQC20U-A
AI2	/
AI3	/
DI0	OUT CLOSED (PNP)
DI1	OUT OPEN (PNP)
PWR	+24Vdc (Supply)
DO1	IN OPEN/CLOSED (NPN)
DO8	/
GND	Gnd

RAMQC-UR M8 female connector	RMBQC-UR M8 male connector
White wire - pin 1	White wire - pin 1
Brown wire - pin 2	Brown wire - pin 2
Green wire - pin 3	Green wire - pin 3
Yellow wire - pin 4	Yellow wire - pin 4
Grey wire - pin 5	Grey wire - pin 5
Pink wire - pin 6	Pink wire - pin 6
Blue wire - pin 7	Blue wire - pin 7
Red wire - pin 8	Red wire - pin 8

	RMAQC-UR	RMBQC-UR
Numero connessioni utente Number of user connections	8	
Contatti Contacts	Dorati Gold-plated	
Tipo di contatto Type of contact	Femmina Female	Maschio Male
Tensione nominale Rated voltage	24 Vdc	
Corrente massima per contatto Max current per contact	1 A	
Temperatura di esercizio Temperature range	5/60°C	
Grado di protezione IP rating	IP40	
Connessione elettrica Electrical connection	1 cavo (8 x 0.14mm ²) 1 cable (8 x 0.14mm ²)	
Lunghezza cavo Cable length	300mm	
Isolamento cavo Cable insulation	PUR	
Guaina cavo Cable sheath	PUR	
Massa Weight	70g	

