



MATERIAL FACT SHEET

313091 RV-7FRM-D

General Data

Product Hierarchy	IAG25301
	ROBOT
	RV-7FR-D
Ext. Material Group	10 STANDARD ITEM
ABC Indicator	A (Available from Stock)

e-shop: https://mitsubishi-electric-eshop.mee.com/mee/FA_IA/EUR/en/p/000000000000313091

FA-Robot: Robotssystem

Series	RV-FR SERIES
Type	VERTICAL
Payload (kg)	7
Max. Reach Radius (mm)	713
Environment specification	OIL MIST
Controller Type	CR800-D
Cycle Time (s)	0,32
Speed (mm/s)	11064
Repeatability (mm)	0,02
Installation Method	FLOOR, CEILING, WALL
Protection Class	IP67
Power Supply 1 Phase (VAC)	200-230
Power Consumption (VA)	2000
Operating Range J1 (deg)	480
Operating Range J2 (deg)	240
Operating Range J3 (deg)	156
Operating Range J4 (deg)	400
Operating Range J5 (deg)	240
Operating Range J6 (deg)	720

Product Dimensions & Weight

Width (mm)	278
Height (mm)	844,4
Depth (mm)	662,6
Weight (kg)	65

Logistic Dimensions & Gross Weight

Length (cm)	139,0
Width (cm)	70,0
Height (cm)	93,0
Gross Weight (kg)	135,000
Volume (cdm)	904,890

Stock Data

Planned Delivery Time (Days)	134
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Life Cycle

Sales Start	01.07.2017
Predecessor	255275 / RV-7FM-D1-S15

Additional Product Information

Binding Tariff Information	DEBTI-10891/21-1
BTI validity date	27.06.2024
Battery included	YES - CHECK SPARE PART LIST

Export Data

Legal Control (Dual Use List)	Not Listed
Country of Origin	Japan (JP)
Preference Status (Supplier Declaration)	Non EU

Environmental

REACH Limit Exceeded	YES
REACH Substance CAS Number	12060-00-3
REACH Substance CAS Number (2)	1303-86-2
REACH Substance CAS Number (3)	7439-92-1
REACH Substance CAS Number (4)	80-05-7
Dangerous Goods Class	9
Dangerous Goods Identifier	UN3091
RoHS Compliance	NOT IN SCOPE
WEEE	B2B

Conformity

CE	COMPLIANT
UKCA	COMPLIANT

Documentation & Media Data

Manual URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=bltdae25c2bd5f2ff94&q=RV-7FRM-D&doc-lang=en
Certificates URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt8050dd1408c11cc2&q=RV-7FRM-D&doc-lang=en
CAD URL Indicator	https://emea.mitsubishielectric.com/fa/advanced-search?ct=document&doc-cats=blt26ecc97a31a841c1&q=RV-7FRM-D&doc-lang=en

Product Packaging

Cardboard (g)	17626
Other paper (g)	120
Aluminum (g)	0
Steel (g)	70
Styrofoam (g)	0
Other plastic (g)	1288
Wood (g)	26500
Glass (g)	0
Others (g)	500

Spare parts

Material	Description	Quantity	Unit
502664	RV-4F/7F MOTOR HG-KR43BK-S920052(400W)	1	PC
598367	RV-4F/7F MOTOR HG-KR13D-S920061	2	PC
598317	RV-4F/7F MOTOR HG-KR053D-S920060	1	PC
265181	RV4-FRL/M HARMONIC DRIVE J1	1	PC
410993	RV-4/7FR HARMONIC DRIVE J5 New type	1	PC
265197	RV-8CRL HARMONIC DRIVE J6	1	PC
265201	RV-4F/L/J2 7F/L/J3 CROSS ROLLER BEARING	1	PC
237502	RV-8CRL CROSS ROLLER BEARING	1	PC
265204	RV-4F/7F BALL BEARING 6902DD	1	PC
262550	RH-12/20FRH BALL BEARING 6815ZZ/A2	1	PC
164946	RH-13/20/7FL(L) BALL BEARING 6809DD	1	PC
265206	RV-4F/7F BALL BEARING 6812DD	1	PC
265207	RV-4F/7F BALL BEARING 606	1	PC
249950	RV-5AS-D BALL BEARING 6805ZZ	2	PC
243685	RV-4F/7F BALL BEARING 6808ZZU76UG	1	PC
154921	RV-6S/SL BEARING 688AZZ1	1	PC
415464	RV-4/7FR BALL BEARING F696DD1MC3PS2S	2	PC
237503	RH-13F/20F/7FLL BALL BEARING 6806DD	1	PC
265209	RV-5AS-D BALL BEARING F608ZZ	1	PC
164945	RV-3SB/3SJB BALL BEARING 687MC3	2	PC
262605	RH-3CH/6CH/6CRH OILSEAL AC1314F0	1	PC
305755	RV-7F/FL MODIFICATION J1 4/6 COLLAR	1	PC
276702	RV-8CRL SAFETY SOCKET 2	1	PC
308838	RV-4FRL/7FRL(L) GEAR R	1	PC
308839	RV-4FRL/7FRL(L) GEAR L	1	PC
265219	RV-4/7FR(L)/M TIMING PULLEY J4AJ5A	2	PC
265220	RV-4/7FR(L)/M TIMING PULLEY J4B	1	PC
278321	RV-7FRLL TIMING PULLEY J6B	1	PC
265223	RV-4/7FR(L)/M TIMING PULLEY J6A	1	PC

Material	Description	Quantity	Unit
415479	RV-4FR/7FR TIMING BELT J6	1	PC
265232	RV-4/7FR(L)/M OILSEAL AD 23 32 5	1	PC
265233	RV-4/7FR(L)/M OILSEAL AD 38 50 7	1	PC
265234	RV-4/7/13/20FRL(L) OILSEAL AD 10 20 5	2	PC
262605	RH-3CH/6CH/6CRH OILSEAL AC1314F0	2	PC
265241	RV-4/7/13/20FRL/M OILSEAL M-110	2	PC
237529	RV-2FR(L)/FR(L)B OILSEAL J5,J6	1	PC
265244	RV-4/7FR(L)/M O RING CO0553A	1	PC
265245	RV-4/7FR(L)/M O RING CO0522A	1	PC
237538	RH-13F/20F/7FLL O RING CO0200-A0	1	PC
154943	RV-6S/SL O RING 51,38x1	1	PC
415484	RV-4/7FR O RING	1	PC
265246	RV-4/7FR(L)/M FELT J1	2	PC
278335	RV-7FRL/13FR(L)/20FR CARD SPACER	2	PC
262558	RH-12/20FRH CONNECTOR IL-2S-S3L(N)	1	PC
237583	RH-12/20FRH GREASE NIPPLE WA610 NYLON	3	PC
164980	RH-12/20FRH GREASE NIPPLE CAP	3	PC
249980	RH-13F/20F/7FLL AIR JOINT UKB6	2	PC
265259	RV-4/7/13/20FRL/M UNION AIR JOINT UKB8	1	PC
265260	RV-4/7/13/20FRL(L)/M CABLE CLAMP -WS10M	2	PC
276668	RH-2FH CABLE GLAND 3	1	PC
164975	RH-12/20FRH PARALLEL PIN H74x8	5	PC
415487	RV-4/7FR HD RING J2/PIN SET	1	PC
415502	RH-FR PIN J2	4	PC
415488	RV-4/7FR HD RING J2	1	PC
265263	RV-4/7FR(L)/M IPPAN KEY 5X5X16	3	PC
249976	RH-13F/20F/7FLL SNAP RING ANA-C37	2	PC
265265	RV-4/7FRL(L)/M SHIM J6 0,1mm	2	PC
265266	RV-4/7FRL(L)/M SHIM J6 0,3mm	1	PC
265267	RV-4/7FRL(L)/M SHIM J6 0,5mm	1	PC
265268	RV-4/7/13/20FRL/M SEAL WASHER 4X7.2	3	PC
237540	RV-5AS-D SEAL WASHER(M6)	4	PC
237585	RV-8CRL LOW HEAD CAP SCREW SSH-EL-M6	4	PC
278352	RV-4FRL/7FRL BRAKE CABLE ASSY (7F-J6)	1	PC
415491	RV-4/7FR BRAKE	1	PC
237552	RV-4FR/7FR STOPPER J1	2	PC
265273	RV-4/7FR(L)/M STOPPER J1	1	PC
237553	RV-4FR/7FR STOPPER J4	1	PC
278359	RV-8CRL STOPPER A	4	PC
265282	RV-4/7/13/20FRL(L)/M COVER CONBOX	1	PC
265306	RV-7FRL/M COVER ARM NO2 U (GROOVED)	1	PC
278390	RV-7FRL CABLE CLAMP BOX	1	PC
265309	RV-4/7FRL/M COVER CONBOX R2	1	PC
237636	RV-5AS-D DIRECTION MARK	1	PC
237602	RH-3CH/6CH/6CRH ALIGNMENT MARK (MINI)	12	PC
237606	RH-12/20FRH EARTH NAMEPLATE	1	PC
237604	RH-12/20FRH COORDINATES DIRECTION MARK a	1	PC
237605	RH-12/20FRH COORDINATES DIRECTION MARK b	1	PC
415497	RV-4/7FR RUBBER SHEET 1	1	PC
237596	RH-13F/20F/7FLL RUBBER SHEET	2	PC
237626	RV-5AS-D RUBBER SHEET (124-169)	1	PC
278340	RV-7FRL/13FR(L)/20FR RUBBER SHEET 6	4	PC
278341	RV-7FRL/13FR(L)/20FR RUBBER SHEET 7	3	PC
164988	RH-13F/20F/7FLL RUBBER SHEET 450x30	1	PC
278350	RV-7FRL/13FR(L)/20FR CONBOX WIRING ASSY	1	PC
134305	LIQUID GASKET WHITE THREE BOND 1212	1	PC
134302	GLUE 242 LOCTITE 250ml	1	PC
134304	ROBOT SILICONE GREASEG501 1KG	1	PC
278338	RV-7FRL/13FR(L)/20FR PLUG UP6	2	PC
243688	RH-12/20FRH PLUG UP8	1	PC
410994	RH-12/20FH POWER CABLE 1F-05UCBL-41	1	PC
602876	CR800 PCB CPU DQ171D	1	PC
405788	CR800 PCB SERVO CPU DQ865B	1	PC
405789	CR800 PCB SYSTEM IO DQ331B	1	PC
405790	CR800 PCB OPTIONAL SLOT DQ332A	1	PC
405791	CR800 PCB CONVERTER DQ801A	1	PC
405794	CR800 PCB INVERTER DQ857A FOR RV-7FR	1	PC
405801	CR800 POWER SUPPLY UNTIL RV-7FR/RH20FR	2	PC
405803	CR800 NOISE FILTER UNTIL RV-7FR/RH20FR	1	PC
405805	CR800 FUSE 500SF-20UL	2	PC

Material	Description	Quantity	Unit
405806	CR800 FUSE HOLDER	2	PC
220184	CR2D CR2Q OPTION COVER	2	PC
405807	CR800 OPTION CASE	1	PC
220273	CR800 TB CONNECTOR	1	PC
262774	NARC 750 FILTER DUST	1	PC
262774	NARC 750 FILTER DUST	1	PC
405808	CR800 CABLE BKOFA1078H01	1	PC
405809	CR800 CABLE BKOFA1078H02	1	PC
405810	CR800 CABLE BKOFA1078H03	1	PC
405811	CR800 CABLE BKOFA1078H04	3	PC
262786	NARC 750/751 LOCK EDGING SADDLE	1	PC
220314	CR2D CR2Q CABLE GUIDE WS-1NS	8	PC
220243	CR800 RUBBER MOUNT KG-010	7	PC
220304	CR800 SPACER MPS-08-0	1	PC
237852	CR800 SEAL ATT. (ELECTRIFIC.) 114-406	1	PC
405813	CR800 CONNECTOR U794D030G52	1	PC
405818	CR800 FAN 2	1	PC
248692	MR-BAT6V1	4	PC
405812	CR800 CONNECTOR U794D030G51	1	PC
64687	FUSE 1,6A	1	PC
405814	CR800 ACIN CABLE BKOFA1006H53	1	PC
405817	CR800 FAN 1	1	PC

Compatible products

Material	Description / Price List Text / Classification
47389	1E-ST0404C Robot option Tube for double pneumatic hand Class 100100606: FA-Robot: Tube
47390	1E-ST0402C Robot option Tube for single pneumatic hand Class 100100606: FA-Robot: Tube
124658	2A-RZ371 Robot option I/O-Interface: 32 inputs /32 Outputs (decentral I/O's) Class 100100604: FA-Robot: Interface Card
214968	R32TB Robot Teaching Box; Narc controller (standard version) Class 100100602: FA-Robot: Teachingbox
218862	2D-TZ378 Robot option I/O-Interface: 32 inputs /32 Outputs (internal I/O's expansion) Class 100100604: FA-Robot: Interface Card
219063	2D-TZ576 Robot option CC-Link-Interface-card Class 100100604: FA-Robot: Interface Card
225756	R32TB-15 Teaching box R32TB with 7 lines display and 15m cable length Class 100100602: FA-Robot: Teachingbox
232808	2D-TZ368 Robot option E/A-Interface: 32 inputs /32 Outputs SINK (internal I/O's) Class 100100604: FA-Robot: Interface Card
255281	1F-VD01E-02 RV-F Pneumatic single valve set incl. noise-inferior Class 100100603: FA-Robot: Valve
255282	1F-VD02E-02 RV-F Pneumatic double valve set incl. noise-inferior Class 100100603: FA-Robot: Valve
255283	1F-VD03E-02 RV-F Pneumatic triple valve set incl. noise-inferior Class 100100603: FA-Robot: Valve
255284	1F-VD04E-02 RV-F Pneumatic quadruple valve set incl. noise-inferior Class 100100603: FA-Robot: Valve
255285	1F-GR35S-02 RV-4F/RV-7F Hand output cable Class 100100605: FA-Robot: Cable
255286	1F-HC35S-02 RV-4F/RV-7F Hand input cable Class 100100605: FA-Robot: Cable
257935	1F-HA01S-01 RV-F External wiring set 1 for the robot base Class 100100605: FA-Robot: Cable

Material	Description / Price List Text / Classification
257936	1F-HB01S-01 RV-F External wiring set 1 for the forearm Class 100100605: FA-Robot: Cable
259885	2D-TZ535 Network Interface for CompactCom module Class 100100604: FA-Robot: Interface Card
268039	RV-F / RV-FR Connector Set RV-4/7/13/20F(R) Connector Set Class 100100607: FA-Robot: Other Option
269546	2D-TZ535-PN-SET Robot Network Interface Profinet IO Class 100100604: FA-Robot: Interface Card
269555	2D-TZ535-PN Network Interface for CompactCom Modul Profinet Class 100100604: FA-Robot: Interface Card
271212	2F-YZ581 Encoder Distribution Unit for robot controller Class 100100604: FA-Robot: Interface Card
271513	1F-HA02S-01 RV-F External wiring set 2 for the robot base Class 100100605: FA-Robot: Cable
271514	1F-HB02S-01 RV-F External wiring set 2 for the forearm Class 100100605: FA-Robot: Cable
273787	1F-DH-04 RV-7F J1 Stopper (not RV-7FLL(M)) Class 100100607: FA-Robot: Other Option
282409	2D-TZ535-EIP-SET Robot Network Interface EtherNet/IP Class 100100604: FA-Robot: Interface Card
313061	4F-SF002-01 Safety option unit MELFA SafePlus for CR800 Controller Class 100100604: FA-Robot: Interface Card
313062	CR800-MB Protection Box IP54 for CR800 Controller Class 100100607: FA-Robot: Other Option
313063	2F-DQ535 Network Interface for CompactCom module CC-Link IE Filed AB6709 Class 100100604: FA-Robot: Interface Card
313064	4F-FS002H-W200 Force Sensor Set 200N incl. Interface unit (2F-DQ561) for FR Series Class 100100607: FA-Robot: Other Option
313105	4F-FS002H-W1000 Force Sensor Set 1000N incl. Interface unit (2F-DQ561) for FR Series Class 100100607: FA-Robot: Other Option
313106	1F-10UCBL-41 Machine cable for CR800 controller, standard, 10m Class 100100605: FA-Robot: Cable
313107	1F-15UCBL-41 Machine cable for CR800 controller, standard, 15m Class 100100605: FA-Robot: Cable
313108	1F-10LUCBL-41 Machine cable for CR800 controller, high flexible, 10m Class 100100605: FA-Robot: Cable
313109	1F-15LUCBL-41 Machine cable for CR800 controller, high flexible, 15m Class 100100605: FA-Robot: Cable
324579	RT ToolBox3 Standard Robot programming and simulation Software, Windows 10/11; USB Class 100101206: FA-Software: Software Robot
324580	RT ToolBox3 Pro Robot programming and simulation Software incl. MELFA-Works, Windows 10/11 Class 100101206: FA-Software: Software Robot
325728	2F-DQ510 MELFA Smart Plus Card Pack A-Type Class 100100604: FA-Robot: Interface Card
325729	2F-DQ511 MELFA Smart Plus Card A-Type Class 100100604: FA-Robot: Interface Card

Material	Description / Price List Text / Classification
325730	1F-02UCBL-41 Machine cable for CR800 controller, standard, 2m Class 100100605: FA-Robot: Cable
327863	1F-20UCBL-41 Machine cable for CR800 controller, standard, 20m Class 100100605: FA-Robot: Cable
327864	1F-20LUCBL-41 Machine cable for CR800 controller, high flexible, 20m Class 100100605: FA-Robot: Cable
334232	RT ToolBox3 Standard UPGRADE Robot programming and simulation Software, Windows 10/11, Upgrade; USB Class 100101206: FA-Software: Software Robot
603944	4F-SF003-05 Safety option unit MELFA SafePlus II Slim for CR800 Controller Class 100100604: FA-Robot: Interface Card
687249	R86TB Robot Teaching Box with 10,1" (Colour / Touch version) Class 100100602: FA-Robot: Teachingbox