

(1)

EU-Type Examination Certificate(2) **Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres****Directive 2014/34/EU**(3) EU – Type Examination Certificate Number: **IEP 20 ATEX 0762U**(4) Product: **M-BMFXX, M-BFFXX and M-BMMXX Series Three-pieces Connection Fittings**(5) Firm Name: **MSM Mühendislik Elektromekanik San. Tic. Ltd. Şti.**(6) Firm Address: **Barbaros Mah. Evren Cad. No : 38 Ataşehir / İSTANBUL**

(7) This product any of acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The IEP Uluslararası Enerji Petrol Gözetim, Sertifikasyon ve Teknik Hizmetler Organizasyonu Tic. Ltd. Sti., notified body number 2284 in accordance with Article 17 of the Directive 2014/34/EU of European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive. The examination and test results are recorded in confidential Report Nr : IEP.Rp.Ex.10-1605 date 05.02.2020.

(9) Compliance with Essential Health and safety requirements has been assured by compliance with;

EN 60079-0 : 2013, EN 60079-1 : 2014 , EN 60079-31 : 2014

(10) If the sign “X” is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the directive 2014/34/EU. Further requirements of the directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the equipment or protective system shall include the following:

**II 2G Ex db IIC Gb
II 2D Ex tb IIIC Db
I M2 Ex db I Mb, IP 66/67****Responsible Person:**Nurettin Terzioğlu
Head of Certification Body**Date of Issue : 06.02.2020**



IEP ENERGY PETROLEUM INSTITUTE

(13)Certificate Nr: IEP 20 ATEX 0762U

(14)Technical Details: M-BMFX Series Connection Fittings;

Product Code	Product Size M		Product Size M1		Cable Dia.mm	ThreadLength (mm)		SpannerWidth SW /D				Protrusion Lenght H (mm)	Weight Kg	
	Gas	Thread (mm)	Gas	Thread mm		ØC	A	A1	Body		Body 1			
									SW	D	SW			D
M-BMF1G	1/2"	20,955	1/2"	18,631	14,00	19,00	20,00	30,00	33,00	30,00	34,50	61,00	0,158	
M-BMF2G	3/4"	26,441	3/4"	24,117	19,00	20,00	20,00	36,00	40,00	36,00	41,50	60,00	0,212	
M-BMF3G	1"	33,249	1"	30,291	25,00	25,00	23,00	41,00	47,00	41,00	47,00	70,00	0,284	
M-BMF4G	1 1/4"	41,490	1 1/4"	38,952	32,00	28,00	30,00	50,00	56,00	55,00	63,00	81,00	0,549	
M-BMF5G	1 1/2"	47,803	1 1/2"	44,845	39,00	28,00	33,00	55,00	62,00	60,00	69,00	85,00	0,567	
M-BMF6G	2"	59,614	2"	56,656	50,00	30,00	35,00	70,00	79,00	75,00	85,00	91,00	0,982	
M-BMF7G	2 1/2"	75,184	2 1/2"	72,226	65,00	33,00	35,00	91,00	100,00	91,00	100,00	91,00	1,386	

Product Code	Product Size M		Product Size M1		Cable Dia.mm	ThreadLength (mm)		SpannerWidth SW /D				Protrusion Length H (mm)	Weight Kg	
	Gas	Thread (mm)	Gas	Thread mm		ØC	A	A1	Body		Body 1			
									SW	D	SW			D
M-BMF1N	1/2"	21,336	1/2"	20,1115	14,00	19,00	16,00	30,00	33,00	30,00	34,50	61,00	0,158	
M-BMF2N	3/4"	26,670	3/4"	25,4435	19,00	20,00	20,00	36,00	40,00	36,00	41,50	60,00	0,212	
M-BMF3N	1"	33,401	1"	31,9100	25,00	25,00	23,00	41,00	47,00	41,00	47,00	70,00	0,284	
M-BMF4N	1 1/4"	42,164	1 1/4"	40,6730	32,00	28,00	25,00	50,00	56,00	55,00	63,00	81,00	0,549	
M-BMF5N	1 1/2"	47,800	1 1/2"	46,3090	39,00	28,00	26,00	55,00	62,00	60,00	69,00	85,00	0,567	
M-BMF6N	2"	60,325	2"	58,8340	50,00	30,00	29,00	70,00	79,00	75,00	85,00	91,00	0,982	
M-BMF7N	2 1/2"	73,025	2 1/2"	70,8817	65,00	33,00	31,00	91,00	100,00	91,00	100,00	91,00	1,386	

M-BFFXX Series Connection Fittings;

Product Code	Product Size M		Product Size M1		Cable Dia.mm	ThreadLength (mm)		SpannerWidth SW /D				Protrusion Length H (mm)	Weight Kg	
	Gas	Thread (mm)	Gas	Thread mm		ØC	A	A1	Body		Body 1			
									SW	D	SW			D
M-BFF1G	1/2"	18,631	1/2"	18,631	14,00	19,00	16,00	30,00	33,00	30,00	34,50	42,00	0,122	
M-BFF2G	3/4"	24,117	3/4"	24,117	19,00	20,00	20,00	36,00	40,00	36,00	41,50	46,00	0,177	
M-BFF3G	1"	30,291	1"	30,291	25,00	25,00	23,00	41,00	47,00	41,00	47,00	56,00	0,248	
M-BFF4G	1 1/4"	28,952	1 1/4"	38,952	32,00	28,00	25,00	50,00	56,00	55,00	63,00	65,00	0,460	
M-BFF5G	1 1/2"	44,845	1 1/2"	44,845	39,00	28,00	26,00	55,00	62,00	60,00	69,00	68,00	0,475	
M-BFF6G	2"	56,656	2"	56,656	50,00	30,00	29,00	70,00	79,00	75,00	85,00	74,50	0,889	
M-BFF7G	2 1/2"	72,226	2 1/2"	72,226	65,00	33,00	31,00	91,00	100,00	91,00	100,00	76,00	1,254	

Product Code	Product Size M		Product Size M1		Cable Dia.mm	ThreadLength (mm)		SpannerWidth SW /D				Protrusion Length H (mm)	Weight Kg	
	Gas	Thread (mm)	Gas	Thread mm		ØC	A	A1	Body		Body 1			
									SW	D	SW			D
M-BFF1N	1/2"	20,1115	1/2"	20,1115	14,00	19,00	16,00	30,00	33,00	30,00	34,50	42,00	0,122	
M-BFF2N	3/4"	25,4435	3/4"	25,4435	19,00	20,00	20,00	36,00	40,00	36,00	41,50	46,00	0,177	
M-BFF3N	1"	31,9100	1"	31,9100	25,00	25,00	23,00	41,00	47,00	41,00	47,00	56,00	0,248	
M-BFF4N	1 1/4"	40,6730	1 1/4"	40,6730	32,00	28,00	25,00	50,00	56,00	55,00	63,00	65,00	0,460	
M-BFF5N	1 1/2"	46,3090	1 1/2"	46,3090	39,00	28,00	26,00	55,00	62,00	60,00	69,00	68,00	0,475	
M-BFF6N	2"	58,8340	2"	58,8340	50,00	30,00	29,00	70,00	79,00	75,00	85,00	74,50	0,889	
M-BFF7N	2 1/2"	70,8817	2 1/2"	70,8817	65,00	33,00	31,00	91,00	100,00	91,00	100,00	76,00	1,254	

Responsible Person:

Nurettin Terzioglu
Head of Certification Body



IEP Uluslararası Enerji Petrol Gözetim, Sertifikasyon ve Teknik Hizmetler Organizasyon Ticaret Limited Sirketi

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(15) Certificate Nr: **IEP 20 ATEX 0762U**

(16) Technical Details:

M-BMMXX Series Connection Fittings;

Product Code	Product Size M		Product Size M1		Cable Dia.mm	ThreadLength (mm)		SpannerWidth SW /D				Protrusion Lenght H (mm)	Weight Kg	
	Gas	Thread (mm)	Gas	Thread mm		ØC	A	A1	Body		Body 1			
									SW	D	SW			D
M-BMM1G	1/2"	20,955	1/2"	20,955	14,00	19,00	19,00	30,00	33,00	30,00	34,50	77,50	0,194	
M-BMM2G	3/4"	26,441	3/4"	26,441	19,00	20,00	20,00	36,00	40,00	36,00	41,50	76,00	0,267	
M-BMM3G	1"	33,249	1"	33,249	25,00	25,00	25,00	41,00	47,00	41,00	47,00	88,00	0,366	
M-BMM4G	1 1/4"	41,490	1 1/4"	41,490	32,00	28,00	28,00	50,00	56,00	55,00	63,00	96,00	0,684	
M-BMM5G	1 1/2"	47,803	1 1/2"	47,803	39,00	28,00	28,00	55,00	62,00	60,00	69,00	98,00	0,707	
M-BMM6G	2"	59,614	2"	59,614	50,00	30,00	30,00	70,00	79,00	75,00	85,00	104,50	1,169	
M-BMM7G	2 1/2"	75,184	2 1/2"	75,184	65,00	33,00	33,00	91,00	100,00	91,00	100,00	120,00	1,748	

Product Code	Product Size M		Product Size M1		Cable Dia.mm	ThreadLength (mm)		Spanner/Width SW /D				Protrusion Lenght H (mm)	Weight Kg	
	Gas	Thread (mm)	Gas	Thread mm		ØC	A	A1	Body		Body 1			
									SW	D	SW			D
M-BMM1N	1/2"	21,336	1/2"	21,336	14,00	19,00	19,00	30,00	33,00	30,00	34,50	77,50	0,194	
M-BMM2N	3/4"	26,670	3/4"	26,670	19,00	20,00	20,00	36,00	40,00	36,00	41,50	76,00	0,267	
M-BMM3N	1"	33,401	1"	33,401	25,00	25,00	25,00	41,00	47,00	41,00	47,00	88,00	0,366	
M-BMM4N	11/4"	42,164	11/4"	42,164	32,00	28,00	28,00	50,00	56,00	55,00	63,00	96,00	0,684	
M-BMM5N	11/2"	47,800	11/2"	47,800	39,00	28,00	28,00	55,00	62,00	60,00	69,00	98,00	0,707	
M-BMM6N	2"	60,325	2"	60,325	50,00	30,00	30,00	70,00	79,00	75,00	85,00	104,50	1,169	
M-BMM7N	21/2"	73,025	21/2"	73,025	65,00	33,00	33,00	91,00	100,00	91,00	100,00	120,00	1,748	

(17) Description of Equipment: M-BMFXX, M-BFFXX and M-BMMXX series three-pieces connection fittings are unions composed of three elements that screw on and turn independently thus allowing the connection of rigid parts. (flameproof enclosure, metallic conduit and dust-tight enclosures)

The coupling between the Three-pieces connection fittings and the apparatus enclosures is made by means of threaded joints. The unions can be male-male (male ring, nut, male body), male-female (female ring, nut, male body) or female-female (female ring, nut, female body).

Three-pieces connection fittings are made of cast galvanized carbon steel(SAE 1045) Doc.No. D1910176 and date 12.02.2019. Three-pieces connection fittings standard threads types are Metric ISO 965/1, Gas DIN 259 and NPT ANSI ASME B 1.20.1.

Service temperature: -40 °C ~ +60 °C

(18) Special Conditions for Safe Use (denoted by U after the certificate number)

18.1 The Three-pieces connection fittings shall be mounted at the electrical apparatus in such a way that accidental rotation and loosening will prevented.

18.2 The maximum current for each conductor which cross-through the Three-pieces connection fittings shall be established taking into account the heating caused by the current flowing through it, the heating of the enclosure on which the Three-pieces connection fittings are mounted and the maximum permissible ambient temperature.

18.3 It is the final assemblers/users responsibility to ensure the threaded joint between the Three-pieces connection fittings and the associated enclosure meet all the requirements of the applicable standards for the assembly.

Responsible Person:

Nurttin Terzioğlu
Head of Certification Body



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(19) Certificate Nr: **IEP 20 ATEX 0762U**

(20) Essential Health and Safety Requirements Of Annex II: This certificate is in the contents of standards that mentioned in item (9) It has been accepted that connection fittings are manufactured according to the producer instructions and the standards mentioned above.

(21) Drawings:

Drawing Nr;	Drawing Name;	Date;
BMF/3	NPT Body Top / Front View 1/2	02.01.2019
BMF/3	NPT Body Top / Front View 2/2	02.01.2019
BFF/3	NPT Body Top / Front View 1/2	02.01.2019
BFF/3	NPT Body Top / Front View 2/2	02.01.2019
BMM/3	NPT Body Top / Front View 1/2	02.01.2019
BMM/3	NPT Body Top / Front View 2/2	02.01.2019

(22) Installation manual 10 pages, dated 01.11.2019. If the chemical property of the material changes, the certificate becomes invalid. The clamping forces must comply with the standard and installation instructions.

Responsible Person:

Nurettin Terzioglu

Head of Certification Body



Date of Issue: 06.02.2020

