



National Petrochemical Company
Petrochemical Research & Technology Company

Instrumentation
Engineering Data Sheet
mass flow controller

Designation		Order No		
GENERAL	1	Tag Number	mfc201-206	
	2	Service	H2	
	3	Line No.		
	4	P & ID No.		
PIPE	5	Line Size	1/4"	
	6	Line O.D	19.1mm	
	7	Wall Thickness	1.65mm	
PROCESS CONDITIONS	8	Pipe line Material	SS(TP316)	
	9	meter size		
	10	End connection size and rating	1/4" or VTA	
	11	End connection Material	SS316L/1.4404	
	12	Mass flow calibrated Range Factory Setting	0 to 200g/h	
	13	Density range		
	14	meter tube shape		
	15	Sensor housing Material	SS316	
	16	meter tube Material	SS316	
	17	pressure level	PN100	
	18	turn down ratio		
	19	Permissibe Gas Volume%		
	20	Accuracy Mass Flow Rate	0.2%F.S.M	
	21	Actual Presr lose in bar		
	TRANSMITTER	22	outlet	4-20mA dc passive Ex-i+HART
		23	Type Smart/Conventional	SMART
		24	Power Supply	External 24vdc
		25	Local Display	
		26	Local Display Integral With Meter/separate	
		27	Cable entry	
		28	Enclosure Rating	IP67
29		EX .Protection requirement	ATEX CAT 3. ZONE1	
30		Transmitter Housing	SS316L	
PROCESS DATA		31	Fluid	H2
	32	State	gas	
	33	Flow	Min Nor Max	
	34	Design Pressure	Design Temperature	
	35	In let press	Out let press	
	36	Allowable Prossure Drop	2-4bar	
	37	Operating Viscosly (Cp)		
	38	Density (kg/m2)operating Conditions		
OPTIONS	39	Compressibility Factor		
	40	Field Junction Box		
	41	local Indicator		
	42	Cable Glands		
	43	Hydraulic Pressure test		
	44	Mateial Certificate		
	45	Enclosure Rating Certificate	Included	
	46	Ex. Protection Certificate	Included	
47	Model Number			
<p>Note: NORMAL CLOSE VALVE</p> <p>* Vendor to Advise</p>				
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Instrumentation
Engineering Data Sheet
mass flow controller

Designation		Order No		
GENERAL	1	Tag Number	mfc202-207	
	2	Service	C2H4(ethylene)	
	3	Line No.		
	4	P & ID No.		
PIPE	5	Line Size	1/2"	
	6	Line O.D	mm	
	7	Wall Thickness	mm	
PROCESS CONDITIONS	8	Pipe line Material	SS(TP316)	
	9	meter size		
	10	End connection size and rating	1/2" or VTA	
	11	End connection Material	SS316L/1.4404	
	12	Mass flow calibrated Range Factory Setting	0 to 12Kg/h	
	13	Density range		
	14	meter tube shape		
	15	Sensor housing Material	SS316	
	16	meter tube Material	SS316	
	17	pressure level	PN100	
	18	turn down ratio		
	19	Permissibe Gas Volume%		
	20	Accuracy Mass Flow Rate		
	21	Actual Presr lose in bar		
	Meter	22	outlet	4-20mA dc passive Ex-i+HART
		23	Type Smart/Conventional	SMART
		24	Power Supply	External 24 v.dc
		25	Local Display	
		26	Local Display Integral With Meter/separate	
		27	Cable entry	
		28	Enclosure Rating	IP67
29		EX .Protection requirement	ATEX CAT 3. ZONE1	
30		Transmitter Housing	SS316L	
TRANSMITTER		31	Fluid	C2H4
	32	State	gas	
	33	Flow	Min Nor Max	
	34	Design Pressure	Design Temperature	
	35	In let press	Out let press	
	36	Allowable Prossure Drop	2-4bar	
	37	Operating Viscosly (Cp)		
	38	Density (kg/m2)operating Conditions		
PROCESS DATA	39	Compressibility Factor		
	40	Field Junction Box		
	41	local Indicator		
	42	Cable Glands		
	43	Hydraulic Pressure test		
	44	Mateial Certificate		
	45	Enclosure Rating Certificate	Included	
	46	Ex. Protection Certificate	Included	
OPTIONS	47	Model Number		
	48			

Note: NORMAL CLOSE VALVE

* Vendor to Advise

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Instrumentation
Engineering Data Sheet
mass flow controller

Designation		Order No		
GENERAL	1	Tag Number	mfc203-208	
	2	Service	C3H6(propylene)	
	3	Line No.		
	4	P & ID No.		
PIPE	5	Line Size	1/2"	
	6	Line O.D	19.1mm	
	7	Wall Thickness	1.65mm	
PROCESS CONDITIONS	8	Pipe line Material	SS(TP316)	
	9	meter size		
	10	End connection size and rating	1/2" or VTA	
	11	End connection Material	SS316L/1.4404	
	12	Mass flow calibrated Range Factory Setting	0 to 12Kg/h	
	13	Density range		
	14	meter tube shape		
	15	Sensor housing Material	SS316	
	16	meter tube Material	SS316	
	17	pressure level	PN100	
	18	turn down ratio		
	19	Permissibe Gas Volume%		
	20	Accuracy Mass Flow Rate		
	21	Actual Presr lose in bar		
	TRANSMITTER	22	outlet	4-20mA dc passive Ex-i+HART
		23	Type Smart/Conventional	SMART
		24	Power Supply	External 24vdc
		25	Local Display	
		26	Local Display Integral With Meter/separate	
		27	Cable entry	
		28	Enclosure Rating	IP67
29		EX .Protection requirement	ATEX CAT 3. ZONE1	
30		Transmitter Housing	SS316L	
PROCESS DATA		31	Fluid	C3H6
	32	State	gas	
	33	Flow	Min Nor Max	
	34	Design Pressure	Design Temperature	
	35	In let press	Out let press	
	36	Allowable Prossure Drop	2-4bar	
	37	Operating Viscosly (Cp)		
	38	Density (kg/m2)operating Conditions		
OPTIONS	39	Compressibility Factor		
	40	Field Junction Box		
	41	local Indicator		
	42	Cable Glands		
	43	Hydraulic Pressure test		
	44	Mateial Certificate		
	45	Enclosure Rating Certificate	Included	
	46	Ex. Protection Certificate	Included	
47	Model Number			
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Instrumentation
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mass flow controller

Designation		Order No		
GENERAL	1	Tag Number	mfc204-209	
	2	Service	C4H8(1Butene)	
	3	Line No.		
	4	P & ID No.		
PIPE	5	Line Size	1/4"	
	6	Line O.D	19.1mm	
	7	Wall Thickness	1.65mm	
PROCESS CONDITIONS	8	Pipe line Material	SS(TP316)	
	9	meter size		
	10	End connection size and rating	1/4" or VTA	
	11	End connection Material	SS316L Compression fitting	
	12	Mass flow calibrated Range Factory Setting	0 to 2Kg/h	
	13	Density range		
	14	meter tube shape		
	15	Sensor housing Material	SS316	
	16	meter tube Material	SS316	
	17	pressure level	PN100	
	18	tube housing Pressure range		
	19	turn down ratio		
	20	Permissible Gas Volume%		
	21	Accuracy Mass Flow Rate	0.2%F.S.M	
	22	Actual Pressure loss in bar		
	TRANSMITTER	23	outlet	4-20mA dc passive Ex-i+HART
		24	Type Smart/Conventional	SMART
		25	Power Supply	External 24vdc
		26	Local Display	
		27	Local Display Integral With Meter/separate	
		28	Cable entry	
29		Enclosure Rating	IP67	
30		EX Protection requirement	ATEX CAT 3. ZONE1	
PROCESS DATA	31	Transmitter Housing	SS316L	
	32	Fluid	C4H8 gas	
	33	Flow	Min Nor Max	
	34	Design Pressure	Design Temperature	
	35	In let press	Out let press	
	36	Allowable Pressure Drop	2-4bar	
	37	Operating Viscosity (Cp)		
	38	Density (kg/m ³) operating Conditions		
OPTIONS	39	Compressibility Factor		
	40	Field Junction Box		
	41	local Indicator		
	42	Cable Glands		
	43	Hydraulic Pressure test		
	44	Material Certificate	Included	
	45	Enclosure Rating Certificate	Included	
	46	Ex. Protection Certificate		
47	Model Number			
<p>Note: NORMAL CLOSE VALVE</p> <p>* Vendor to Advise</p>				
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