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**PRODUCT: HS.211.20 DESCRIPTION: Injector**

**GENERAL CHARACTERISTICS:**

Handled fluid:	LPG - CNG
Handled fluid temp. range: [°C]	-15°C to +80°C
Operating temperature range: (environment) [°C]	-20°C to +100°C
Liquid phase filtration ratio requirement:	min. 10µ
Gaseous phase filtration ratio requirement:	min. 80µ
Lubrication:	not required
Max.operating frequency: (@1 bar - 20°C - 1,5 ms. peak time) [Hz]	150
Product life expectancy: (@1bar rel. w with air)	>500 MI. Cycles
Leakage: (max.)	15 cc/h.
IP protection ratio	IP65

**Pressure: (@12Vdc)**

Typical working pressure [bar rel.]	1,0 - 2,0
Handled pressure (counter pressure included) [bar rel.]	0,5 - 3,0
Classification pressure (R67-R110 class2) [bar rel.]	4,5

<b>Flow Rate: (@typical working pressure)</b>	[bar rel.]	1,00	2,00
	[Slm] (1)	88 ±5%	132 ±5%
	[Nm] (with air)	94,8 ±5%	142 ±5%
	[g/s]	1,896 ±5%	2,844 ±5%

<b>Response time: (@ 12Vdc with air)</b>	[bar rel.]	1,00	2,00
Opening response time: (@12 Vdc,25Hz.) (2)	[ms]	1,00 ±0,20	1,10 ±0,20
Closing response time: (2)	[ms]	1,00 ±0,20	0,85 ±0,20
Pressure resp.time from P=0 to P=max:	[µs]	500	500
Pressure resp.time from P=max to P=0:	[µs]	500	500

**ELECTRICAL CHARACTERISTICS:**

Electrical control:	Ref. Drawing code 544.000 C	
Coil resistance: (@20°C) [Ω]	2 ±5%	
Speed-up voltage range: [Vdc]	10 to 14	
Min.Functional voltage: (@20°C)	[Vdc]	6,0 (@ 1bar- 2,5ms. Peak time)
	[Vdc]	6,5 (@ 2bar- 3,0ms. Peak time)

**Peak & Hold characteristics: (typical)**

Typical Speed-up Time: (@ 12Vcoil - 20°C - 50hz.) ( Stated values should be modified considering variations of pressure, temperature, voltage )	[ms.]	2,0 (from 0,5 to 1,5 bar rel.)
	[ms.]	2,5 (from 1,5 to 2,0 bar rel.)
	[ms.]	3,0 (from 2,0 to 3,0 bar rel.)
Speed-up current: (@ 12Vdc)	[Amp.]	≤ 6
Holding current:	[Amp.]	0,8

**MECHANICAL CHARACTERISTICS & CONNECTION:**


Dimensions:	Ref. Drawing code C21.052K
Electrical connections:	Ref. Drawing code C21.052K
Pneumatic connections:	Ref. Drawing code C21.052K
Weight: [g.]	38

**ECE (UN Economic Commission for Europe) regulation compliance:**

ECE R67 approval:	67R01 0298
ECE R110 approval:	110R00 0135

(1) Instrument ref. to standard condition: T=0°C P=1 bar  
(2) Response time measured with accelerometer device

CRONOLOGIA REVISIONE				
ZONA	REV	DESCRIZIONE	DATA	APPROVATO
--	E	update specs (validation test)	20/11/2009	prom4
--	F	updated values	04/02/2010	prom4

<b>MATRIX</b>		Descrizione <b>Technical Specification</b>				Tolleranze espresse in µm Tolerances are expressed in µm		
		Scala-Scale		A4	Tolleranze generiche Unspecified tolerances	ISO 2768-fH	Firma - Sign Nuccio	Visto - Check Barbero
Prodotto-Product HS.211.20		Materiale-Material		Raggi non quotati Unmeasured radius		Cod. Greggio Code Blank		
N. CTF		Tratt. superf.-Surface finish		Smussi non quotati Unmeasured corner		Cod. Semilavorato Cod. Semimachined		
T.P.	Ar. Gest.	N.P.M.	Tratt. term.-Heat treatment		Angoli di spoglia Draft angle		Codice Code	<b>C21.051J</b>