

# TEMPERATURE TRANSMITTER

**Bulletin No.3100**

Effective : JAN. 2012

Supersedes : OCT. 2010



... the level & gas people

ISO-9001 : 2008 CERTIFIED COMPANY



## TEMPERATURE TRANSMITTER HART WITH 4-20mA OUT PUT

Temperature Transmitter Series 3100 is highly accurate, cost effective and is available with HART protocol. It is galvanically isolated and has internal temperature sensor for active temperature compensation. It is also available in head mounted and 2" pipe mounting (field) version.

### GENERAL

- Calibration by HART calibrator.
- 2 Wire technology with 4-20mA output.
- Universal transmitter (RTD,T/C, resistance, voltage) settable via HART-protocol
- Universal setting with HART-protocol for various input signals (2 Wire)
- Galvanic isolation
- An internal temperature sensor for active temperature compensation
- Blind transmitter series 2300 also available

## FIELD MOUNTING 2 WIRE TEMPERATURE TRANSMITTER WITH DISPLAY

### TECHNICAL DATA

Series	: 3100
<b>Universal Input</b>	
RTD	: Pt100, Pt500, Pt1000
T/C	: B,E,J,K,N,R,S,T
OHM	: 0.....10k $\Omega$
mV	: -100.....200mV
Other input	: on request
Output signal	: 4-20mA + HART protocol
Supply voltage	: 7.5 V.....45 Vdc
Load Max	: 600 $\Omega$ at 24 Vdc
Ambient temperature	: -40 to 85°C
Cold junction	: Internal
Galvanic isolation	: 2k VAC (in/Out)
Adjustability	: $\pm$ 20% of span
Linearity	: $\pm$ 0.25% of span
Accuracy	: $\pm$ 0.25% of span.( $\pm$ 0.1% on request)
Response time	: within 1 second.
Adjustment	: Zero & span are adjustable by two push button/HHC
Mounting	: 2" pipe mounting
Damping	: 0-32 second

### THERMOCOUPLES REFERENCE DATA (ITS 90)mV v/s Temperature

TYPE	"T" Cu-CuNi	"J" Fe-CuNi	"K" NiCr-NiAl	"N" NiCrSi-NiSi	"S" PtRh10%-Pt	"R" PtRh13%-Pt	"B" PtRh30%-PtRh6%	"E" NiCr-CuNi
Calibration	IS 2056/ASTME 230	IS 2057/ASTME 230	IS 2054/ASTME 230	ASTME 230	IS 2055/ASTME 230	IS 2055	IS 6720	ASTME 230
Tolerances	Standard	± 1°C or ±0.75%	± 2,2°C or ±0.75%	± 2,2°C or ±0.75%	± 1,5°C or ±0.25%	± 1,5°C or ±0.25%	± 0.5%Over 800°C	± 1.7°C or ±0.5%
	Special	± 0.5° Cor ±0.4%	± 1.1° C or ±0.4%	± 1.1° C or ±0.4%	± 0.6° C or ±0.1%	± 0.6° C or ±0.1%	10.25% Over 800°C	± 1.°C or ±0.4%
TEMPERATURE°C	-100	-3,379	-4,633	-3,554	-2,407	-	-	-5,237
	0	0	0	0	0	0	0	0
	100	4,279	5,269	4,096	2,774	0,646	0,647	6,319
	200	9,288	10,799	8,138	5,913	1,441	1,469	13,421
	300	14,862	16,327	12,209	9,341	2,323	2,401	21,036
	400	20,872	21,848	16,397	12,974	3,259	3,408	28,946
	500	-	27,393	20,644	16,748	4,233	4,471	37,005
	600	-	33,102	24,905	20,613	5,239	5,583	5,093
	700	-	39,132	29,129	24,527	6,275	6,743	53,112
	800	-	45,494	33,275	28,455	7,345	7,950	61,017
	900	-	-	37,326	32,371	8,449	9,205	68,787
	1000	-	-	41,276	36,256	9,587	10,506	76,373
	1100	-	-	45,119	40,087	10,757	11,850	
	1200	-	-	48,838	43,846	11,951	13,228	
	1250	-	-	50,644	45,649	12,554	13,926	
	1300	-	-	52,410	47,513	13,159	14,629	
	1400	-	-	-	-	14,373	16,040	
	1500	-	-	-	-	15,582	17,451	
	1600	-	-	-	-	-	-	11,263
	1700	-	-	-	-	-	-	12,433

### ORDERING INFORMATION

MODEL 3100	SMART TEMPERATURE TRANSMITTERS	
	CODE	LOCAL INDICATOR
	A	Without Indicator
	B	With Indicator
	CODE	MOUNTING BRACKET
	1	Without Bracket
	2	With Bracket
	CODE	ELECTRICAL CONNECTION
	C	1/2"NPT
	D	3/4"NPT
	CODE	OPTIONAL ITEMS
	3	316 SS Housing
	4	Aluminum Housing
	CODE	PROTECTION
	W	Weather proof
	E	Explosion proof
	I	Intrinsically Safe

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Specifications Subject to change without prior notice