






Technical Comparison - 22777X to 142

Brand		Endress + Hauser
Part number	22777X	142
Designation	2-wire HART transmitter	Temperature transmitter
Design		
Dimensions	Ø 110mm	Ø 90,9
Dimensions (W x H x D)	110 X 145 X 125,5 mm	112 X 135 X 106 mm
Temperature range / silicone O-ring	-40...+85°C	-40...+70°C
Temperature range FKM O-ring	-20...+85°C	
Protection degree	IP54 / IP66 / 68	IP67 / Nema 4X
HART revision	5 & 7	5
HART 5 polling address	Up to 15 transmitters	Up to 15 transmitters
HART 7 polling address	Up to 63 transmitters	No
Display		
Diameter	60 mm diameter	
Dot matrix display 64 X 96 pixels	Yes	No (5 digit Measure value + 5 digit status/information)
0,90,180 & 270 deg. position adjustment	Yes	Yes
Radial bar graph	Yes	Yes
"Trend" arrow indicates	Yes	No
Selectable white/red backlight.	Yes	No
LOI (local operator interface)	Yes 3 optical buttons	No, only access via HART signal
LOI Password protection / simulation	Yes	Only hardware (DIP-S for write protect / simulation)
Guided menu structure	Yes	No
Scrolling text message / advanced diagnostic	Yes	No / Yes
Input:		
RTD	Pt50, Pt100, Pt200, Pt500, Pt1000	Pt50, Pt100, Pt200, Pt500, Pt1000
Ni	Ni50, Ni100, Ni120, Ni1000	Ni100, Ni120
Cu	No	Cu 10, Cu 50, Cu 100
TC	B, E, J, K, LR, N, R, S, T, U, W3, W5	B, E, J, K, N, R, S, T, W3, W5, L, D
LinR	0...5 kOhm	10....2 kOhm
mV	-800...800 mV	-20....100 mV
Special RTD / TC custom curve	Yes	Yes
Accuracy	± <0,05 % of selected range	± <0,1 % of selected range
Output:	4...20mA	4...20mA
NE 43 (sensor error / out of range)	Yes	Yes
Response Time	440 ms	< 1000 ms
Damping	1s...60s programmable	1s... 60 s programmable
Configuration	LOI	No
	Preset and HART modem	No
	HHC, DCS or AMS via HART	Yes
Supply		
Ex ia IS	10 (12 with backlight)....30 VDC	11....40 VDC
Other	10 (12 with backlight)..... 35VDC	
Isolation		
Input to output (test/operation)	1.5 kV AC / 50 VAC	2 kV / ?
EMC		
EN 61326-1	<+/- 0,1 % of span	Yes, %?
Namur NE21 A criteria burst	<+/- 1 % of span	Yes, %?
Warranty	5 years	?
Approvals		
ATEX	Yes	Yes
IECEX	Yes	Yes
FM	Yes	Yes
CSA	Yes	Yes
INMETRO	Yes	Yes
EAC TR-CU 020/2011	EN 61326-1	Yes
EAC Ex TR-CU 012/2011	Yes	Yes
NEPSI	Yes	Yes
DNV Marine	Yes	Yes
GL	Yes	Yes
SIL	FMEDA report	No