

 HYD	PRODUCT STANDARD TURBINES & COMPRESSORS			TC 5 5804
				REV. NO. 04
				PAGE 02 OF 06
<u>UNIVERSAL TYPE HART COMPATIBLE HAND-HELD COMMUNICATOR</u>				
1.0	<u>SCOPE:</u>	This is a hand-held instrument that provides interface with all HART compatible instruments irrespective of the manufacturer of the instruments.		
2.0	<u>SPECIFICATIONS:</u>			
	a) Applicable device	:	The communicator shall have device descriptions built in for smart type electronic pressure, differential pressure, temperature, level transmitters, valve positioner etc.	
	b) Transmission line requirement	:	Line length – max. 2 Km (0.75 to 1.25mm ² cable) Low resistance – 250 to 575 Ohms Load Capacitance – 0.22 µF max. Load Inductance – 3.3 mH max.	
	c) Display	:	8 line by 21 characters (128x 64 pixels) LCD	
	d) Keypad	:	25 large keys including 6 action keys, 4 software defined function keys, membrane type with tactile feedback.	
	e) Power Source	:	Rechargeable battery pack with power supply (100/240V AC, 50 Hz, US/UK/EU connection)	
	f) Memory	:	12 MB (min)	
	g) Ambient temperature	:	0 to 50°C	
	h) Ambient humidity	:	0-95% RH	
	i) Hazardous location certification:	:	CENELEC/ATEX, FM, CSA intrinsically safe (includes FISCO as applicable) for NEC ,Class I, Div 1, Gas Group A,B,C & D.	
	j) Accessories	:	Lead set with minigrabber and alligator clips, carrying case, user manual	
	k) Device description language	:	Fully loaded	
	l) Easy Upgrade	:	System application software and device description download for a period of 3 years.	
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 HYD	PRODUCT STANDARD TURBINES & COMPRESSORS	TC 5 5804
		REV. NO. 04
		PAGE 03 OF 06
	J) The calibrator for variant no 03 shall be supplied along with the following accessories along with carry case. i. Power adapter. ii. Compensation sensor. iii. Communication cable. 3.0 The offered universal type HART/ HART & FF compatible communicator shall be able to provide interface with pressure and differential pressure transmitters, level transmitters, temperature transmitters , valve positioner etc.(wherever applicable) of the following make as a minimum: -Fisher Rosemount -Fuji -Tata Honeywell -Yokogawa -Smar -ABB - Fisher Xomox - Dresser 4.0 <u>IDENTIFICATION MARKINGS:</u> a) The following minimum identification markings shall be stamped onto an identification tag/label fixed to the transmitter. - Manufacturer's Type/Model Number. b) 12 digit material code of BHEL shall be marked on the name plate. 5.0 <u>PAINT COATINGS:</u> Manufacturer's well proven paint coatings shall be used if painting is done on any part. 6.0 <u>INSPECTION AND TEST REQUIREMENTS:</u> a) Certificate of conformance shall be furnished. b) FM Certificate for Intrinsic safe execution. 7.0 <u>GUARANTEE CERTIFICATE:</u> A guarantee certificate for 18 months of trouble free operation from date of shipment or 12 months from the date of commissioning whichever is earlier shall be furnished. 8.0 <u>DOCUMENTS:</u> The following Technical Information / Documents shall be furnished. a) Along with offer (2 copies each) - Technical catalogues / literature.	
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 HYD	PRODUCT STANDARD TURBINES & COMPRESSORS	TC 5 5804
		REV. NO. 04
		PAGE 04 OF 06
	b) _After placement of order (3 copies each) - Operation and Maintenance manual for the Communicator - Inspection and Test certificate - Guarantee certificate 9.0 <u>PACKING:</u> The material shall be properly packed to ensure that it is capable of withstanding transit risks without damage. 10.0 <u>MARKING ON PACKING CASE:</u> The following details shall be marked on packing case 1. Manufacturers name 2. BHEL purchase order number 3. BHEL product standard number	
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VARIANT TABLE:

VAR. NO.	DESCRIPTION	BHEL MATERIAL CODE
01	UNIVERSAL TYPE HART COMPATIBLE HAND HELD COMMUNICATOR	TC9755804013
02	UNIVERSAL TYPE HART & FOUNDATION FIELBUS COMPATIBLE HAND HELD COMMUNICATOR	TC9755804021
03	Calibrator Yokogawa-CA71	TC9755804030

 HYD	PRODUCT STANDARD TURBINES & COMPRESSORS			TC 5 5804
				REV. NO. 04
				PAGE 06 OF 06
RECORDS OF REVISION				
REV.NO.	DATE	REVISION DETAILS	REVISED	APPROVED
00	20.01.2001	FIRST ISSUE	-----	
01	28.02.2002	GENERALLY REVISED	AK	SN
02	06.11.07	VAR 02 ADDED AND GENERALLY REVISED	PSV	VVS
03	25.06.12	VARIANT 03 ADDED	RAM	PSV
04	05.04.13	Clause 2-j added.	RAM	PSV
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