eZtrend V5 Electronic Data Recorder

10/01 Page 1 of 8 43-TV-03-08

Specification

Function

Honeywell's eZtrend recorder provides cost effective electronic data recording in a compact DIN size recorder. The recorder accepts up to 6 universal analog inputs and stores data on an integral, removable storage media. The data is displayed on a five inch color LCD with wide viewing angles. The operator interface provides easy access to the recorder menus for quick set up and replaying of the data. Data is stored under pen configurations, in secure files and since the data is directly related to a pen there is no need to remember file names and files structures. An Ethernet connection is provided standard to allow direct connection of the recorder to a LAN or the Internet.

The TrendManager Software Suite ties your process together. Access the recorders through the plant wide LAN or Internet. Trend Manager provides the tools for real-time communications, data analysis, and configuration, for the entire family of electronic data recorders including the eztrend recorder.

Features

- Five Inch Color Display makes it easy to interpret process data and take action with the easy to understand bar charts, digital values and trends.
- Ethernet Connectivity provides unlimited connectivity to local area networks (LANs) or the internet.
- Paperless Chart Recording eliminates the need for paper and pens with their associated cost and mess.
- Total Data Integrity data is stored in secure files based on pen designations making it easy to retrieve the data based on process information rather then having to remember file names.
- Up to 6 Analog Inputs up to six universal analog inputs that can monitor process variables from a variety of sensors.
- **Data Storage** data is stored on a standard 1.44MB floppy.
- **DIN Standard Mounting** fits standard DIN cutout and allows for easy replacement of existing 100mm paper chart recorders.
- CE Mark Conformity with 73/23/EEC, Low Voltage Directive



Features, continued

- Independent Display Chart Speeds and Logging rates logging rates can be programmed completely separate from the chart display speed, allowing the data to be displayed and stored at the rates that are best suits the application.
- Universal Power no concern with plugging the recorder into the wrong voltage - the instrument is designed to work between 90 and 250 Vac.
- Real Time Clock provides accurate time stamping of logged data and events and is battery backed up to prevent a loss of the clock time/date
- Large Memory Buffer 2Mbyte battery backed buffer insures that data is not lost during routine operation
- Password Protection multiple levels of password protection provided to insure compliance with 21CFR Part 11. Up to 4 levels of password protection with up to ten different passwords are available for use. The password can prevent unauthorized entry to the entire recorder configuration or just portions of the recorder configuration or

Features, continued

- Fuzzy Logging This standard feature provides a unique method to increase the storage capacity of the recorder. The data is monitored to determine changes in process data, if no changes are observed data is logged periodically. If data is changing rapidly it is recorder normally at the programmed rate. By not logging data that is static, data compression of up to 100:1 or more can be observed saving valuable disk space. The amount of disk space left is easily observed and can be set up as an alarm limit to insure that data is not lost
- Alarms up to thirty-two integral "soft" alarms are easily set by users to announce selected, out-of-limit conditions.

and 89/336/EEC EMC Directive.

Options

- •Alarm Output up to six integral SPDT relays are available to activate user's external equipment.
- *Math* A full function math capability is provided. This feature handles up to a 200-character math expression. Math also includes 6 extra virtual pens.
- *Digital Input* the six-relay option also includes two digital inputs. The digital inputs allow users to initiate from a remote location through the two dry contact closures, selected recorder functions, such as start/stop/reset totalization, mark the chart.
- Event Markers provides an easy method for a user to mark an event or message on the electronic recorder. These messages are time stamped and can be up to 44 characters long. Additionally, certain recorder actions such as start/stop recording, digital inputs actions, user key presses, etc. can also be logged.
- Customer ID Tagging

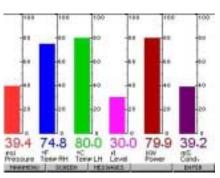
Trend Manager Suite

- *TrendViewer* Standard software package for viewing, graphing, and printing stored data.
- TrendManager Pro this is an advanced data analysis/archiving software package. It provides full configuration of the recorders along with e-mail set up. TrendManager Pro also allows files to be exported using comma separated variables (CSV) format.
- TrendServer Pro is a fully network aware software package for communicating with the recorders. It supports all the capabilities of Trend Manager Pro plus FTP (file transfer protocol) and Web browser access. TrendServer Pro provides multi-level, multi-user access to the recorder data by various departments with security.

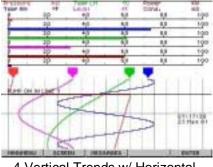
operation.



3 Vertical Trends w/Horizonal Bars



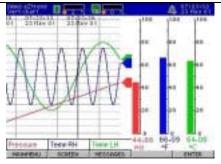
6 Vertical Bars



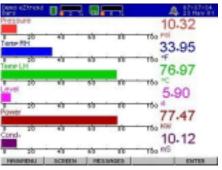
4 Vertical Trends w/ Horizontal Bars



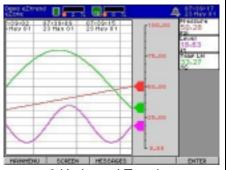
Panel Meter



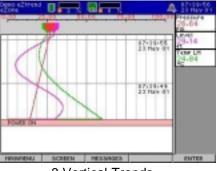
3 Horizontal Trends w/ Vertical Bars



6 Horizontal Bars



3 Horizontal Trends



3 Vertical Trends

Specifications

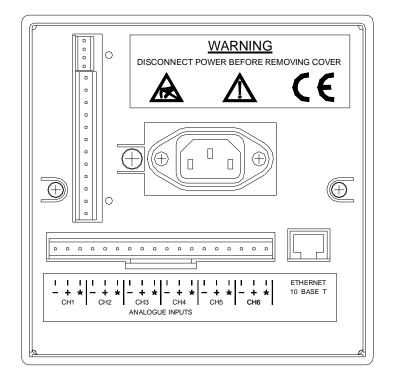
Opcomoation		Design Attributes								
Digital Indication 9	2 Dienlay									
Digital Indication & Display		Display Type: Color STN QVGA Display								
		Screen Size: 5" diagonal Resolution: 320 x 240 pixels								
				pixeis alues update	ad every 250) ms				
Analog Trace Colo	re									
Analog Hace Colo	13	Pen 1 - Dark Red, Pen 2 - Blue, Pen 3 - Green, Pen 4 Magenta Pen 5 Cyan Pen 6 Bright Ped								
Data Storage		Pen 4 - Magenta, Pen 5 - Cyan, Pen 6 - Bright Red Media: 3.5" 1.44MB floppy (Standard)								
Data Storage		Internal Data Buffer: 2 Mbytes								
		Setup: Stored in EEPROM								
Data Storage Capa	city	# of Pens Estimated Disk Capacity (1.44MB Floppy)								
Data Otorago Gapa	ony	2	4D, 2Hr	40D, 17Hr	122D	244D	3.3 Years	6.6 Years		
		4	2D, 1Hr	20D, 8Hr	61D	122D	1.67 Years	3.3 Years		
		6	1D, 8Hr	13D, 8Hr	40.5D	81D	1.1 Years	2.2 Years		
		Rate	1 Sec	10 Sec	30 Sec	60 Sec	5 Min	10 Min		
Display Chart Spec	24e						_	10 171111		
Communications		mm/hour: 1, 5, 20, 30, 60, 120, 600, 1200 (2.7 days to 3.25 minutes) Ethernet 10 Base-T connector (Standard)								
		supports FTP Protocol, Trendbus (Real Time), Web.								
Clock		Calendar function, daylight savings time adjustable manually or with comms								
		Time can be						· -		
		Tolerance: 2								
		Battery back				ife (powered	d)			
Alarm Set Points							to announce	selected		
		out of limit								
Languages		English, Fre								
CE Conformity	This product is in c	onformity witl	n the protec	ction require	ments of the	following E	uropean Co	uncil		
	this product with ar	EEC , the Low Voltage Directive, and 89/336/EEC , the EMC Directive. Conformity of ny other "CE Mark" Directive(s) shall not be assumed.					nformity of			
Product	Class I: Cord Conn	Connected, Panel Mounted Industrial Control Equipment with protective earthing								
Classification	(grounding). (EN 6				o qp			9		
Enclosure Rating	Front panel IP 65 (I	Front panel IP 65 (IEC 529)								
Installation										
Category (Over-	Cotomomi III (EN C4	040.4\								
voltage Category)	Category II: (EN 61									
Pollution Degree		2: (Ref. IEC 664-1)						::: 4 \		
EMC Classification		ISM Equipment (EN 55011, emissions), Industrial Equipment (EN 61326, immunity) 61010-1. Panel Mounted Equipment, Terminals must be enclosed within the panel.								
Safety	Complies with EN6				rerminais n	nust be enci	osea within	tne panei.		
Number of Innute	Analog Inputs 2, 4 or 6 Universal inputs									
Number of Inputs Input Types		EMF (mv, V, mA), Thermocouple, RTD								
Minimum Input Sp	an	Range is fully configurable with span limitation of the operating range selected								
Input Resolution	w	16 bits (0.015%)								
Input Impedance		Current loop resistance dc: 10 ohms ± 5%								
mpat impodulios		All others: 1 Meg Ohm								
Source Impedance		RTD: 40 ohms per lead maximum								
Input Sampling Rate		100msec for all inputs								
Input Sampling Method		Method: Sample, Average, Min-Max								
Input Filter		Single Low pass filter software adjustable 1 to 15 seconds								
Linear Input Scaling		-999999 to 999999, scale factor of 1 to 9999 Decimal Point automatic or programmable								
		Engineering units, user definable (5 characters)								
Input Isolation	Common Mode: 250 Volts AC Normal Mode: 250 Volts AC									
Insulation Resistar	nce	$>9.9M\Omega$ Each terminal to ground terminal								
Logging										
Logging Method				Method: Sample, Average, Min-Max						
Logging Types		Continuous, Events, Fuzzy								
Logging Rates			100mSec to 4 days per log							
Fuzzy Logging		A secure data storage technique which typically delivers data compression ratio of 100:1. or more; self teaching, storing the data at a variable rate to match the process								

Performance							
Input Actuation (Linear)	Range		Accuracy			Temp. Stability	
Millivolts dc		to 100	±0.04%			±0.01%/°C	
	-200 t		±0.04% ±0.01%/°C				
Volts dc	-1.0 t		±0.04% ±0.01%/°C				
	-10 t		±0.04% ±0.01%/°C				
	Note for 4-20mA inputs: signal needs to be converted to millivolt or voltage signal and input actuation set to this. (That is, 10 ohm resistor and use ± 200 mv input actuation or 250 ohm and use ± 10 volt actuation.)						
Input Actuation		nge	Accuracy			Temp.	
(Thermocouples)	°F	°C	±°F	±°C	±% Span	Stability ± Degrees Error Per 1 Degree ∆T	
	32 to 3182	0 to 1820					
В	32 to 1112	0 to 600	18	10	0.7%	0.15%/°C	
	1182 to 3182	600 to 1750	7.2	4	0.3%	0.13%/°C	
C(W5)	32 to 4172	0 to 2300					
	32 to 4172	0 to 2300	9	5.5	0.3%	0.06%/°C	
E	32 to 1472	-200 to 1000	3.6	2	0.3%	0.06%/°C	
J	-328 to 2174	-200 to 1190					
	-328 to 32	-200 to 0	5.4	3	0.25%	0.03%/°C	
	32 to 2174	0 to 1190	2.7	1.5	0.15%	0.03%/°C	
K	-328 to 2192	-200 to					
	-328 to 32	1350	5.4	3	0.2%	0.03%/°C	
	32 to 1832	-200 to 0	3.6	2	0.15%	0.03%/°C	
	1832 to 2462	0 to 1000	4.5	2.5	0.15%	0.03%/°C	
	200 / 4050	1000 to 1350					
L	-328 to 1652	-200 to 900	_	0.75	0.00/	0.000/ /°0	
	-328 to 212	-200 to 100	5	2.75	0.3%	0.03%/°C	
NI (NII ana ali NII ali)	212 to 1652	100 to 900	2.7	1.5	0.3%	0.03%/°C	
N (Nicrosil Nisil)	-328 to 2372	-200 to 1300	F 4	2	0.00/	0.050/ /°C	
	-328 to 32 32 to 2732	-200 to 0 0 to 1300	5.4 5	3 2.75	0.2% 0.2%	0.05%/°C 0.04%/°C	
R	32 to 2732		5	2.75	0.2%	0.04%/ C	
K	32 to 572		7.2	4	0.20/	0.1%/°C	
				3	0.3%		
S	572 to 3092 32 to 3092	300 to 1750 0 to 1750	5.4	3	0.2%	0.1%/°C	
3	32 to 572		7.0	4	0.20/	0.10/ /°C	
	572 to 3092	0 to 300 300 to 1750	7.2 5.4	3	0.3% 0.2%	0.1%/°C 0.1%/°C	
Т	-328 to 752	-200 to 400	5.4	3	0.270	0.176/ C	
'	-328 to 32	-200 to 400	3.6	2	0.35%	0.08%/°C	
	-326 to 32 32 to 752	0 to 400	1.8	1	0.35%	0.08%/°C	
W	1832 to 4172	1000 to 2300	1.0	'	0.276	0.0076/ C	
"	1832 to 3272	1000 to 2300	5.4	3	0.3%	0.15%/°C	
	3272 to 4172	1800 to 2300	5.4	3	0.3%	0.15%/°C	
Chromel/Copel	-74 to 1110	-50 to 600	0.4	3	0.070	0.1070/ 0	
Om om on coper	-74 to 1110	-50 to 600	1.8	1	0.3%	0.05%/°C	
Input Actuation	°F	°C	± °F	± °C	±% Span		
(RTD's)	-						
PT100							
100 ohms (To BS1904)	-328 to 752	–200 to 650	2.7	1.5	0.2%	0.05%/°C	
PT200							
200 ohms	-328 to 752	–200 to 180	2.7	1.5	0.4%	0.05%/°C	
CU53	32 to 300	0 to 150	2.7	1.5	0.9%	0.05%/°C	
Ni120	-112 to 464	-80 to 240	2.7	1.5	0.5%	0.05%/°C	

Specifications, continued

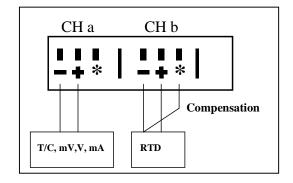
Physical Parameters								
	Calva	nizad staal with hig	<u> </u>		azal and caratab registent long			
Enclosure	Galvanized steel with high impact resistant polycarbonate plastic bezel and scratch resistant lens. With proper panel mounting and required gasketing the eztrend is designed to be splashproof.							
Mounting (Panel)		Mounting adjustable for panel thickness of 2 to 20mm						
Dimensions		Adapter kits available for covering existing panel cutouts.						
Dimensions		See Figure 3						
Weight	2.5Kg	2.5Kg						
Color		Bezel: Black						
Wiring Connections	IEC Power Plug. Removable terminal strip for input and alarm connections							
			Options	3				
Alarm Output	Four or six relays. Six Relay Option includes two digital inputs Relay Contact Ratings: 3 Amp 120VAC with Resistive Load, SPDT							
Digital Input	Two v	Two voltage free contacts available as part of the Six Relay Option						
Totalizers	Availa storag	Available as part of Math Option. One totalizer per input. Totalizer value is assigned to a pen for data storage. Totalization values are ten digits plus exponent						
Math Algorithms	Free form math, supports 200 character expression. Supports common operators +, -, *, /, Totals, Modulus, Over, Under, , Out, CJC, Memory Use, Disk Use, PC Card Use, Pens, Outputs, Absolute Value, Hi, Lo, Idle. Math includes 6 extra virtual pens							
Event Markers	Event Low, F Event	Event Messages can be up to 44 Characters, Event Causes: Into Alarm, Out of Alarm, Disk % Full, Totalizer Start/Stop/Reset, Dig. In High, Dig. In Low, Relay High, Relay Low, T/C Open Circuit Event Effects: Mark Chart, Logging, Start/Stop Totalizer, Set/Clear Relay, e-Mail Customer ID Tagging (3 lines of up to 22 characters each line)						
Miscellaneous	Custo		•	·				
		Enviror	mental and Oper	ating Conditions				
Parameter		Reference	Rated	Extreme	Transport and storage			
Ambient		67 to 77 °F	58 to 104 °F	32 to 122 °F	–14 to 140 °F			
Temperature		19 to 25 °C	15 to 40 °C	0 to 50 °C (without Floppy)	–10 to 60 °C			
Relative								
Humidity (%RH)		50 to 65*	10 to 90*	5 to 90*	5 to 95*			
Vibration								
Frequency (Hz)		0	0 to 70	0 to 100	0 to 100			
Acceleration (g) 0 0.1 Mechanical Shock		0.1	0.2	0.5				
Acceleration (g)		0	1	5	20			
Duration (ms)		0	30	30	30			
Mounting Position from Vertical		0		30				
Tilted Forward		5°	20°	25°	Any			
Tilted Backward		5°	20°	25°	Any			
Tilted to Side (±)		5°	20°	25°	Any			
Power Requirements								
Voltage (VRMS)		119 to 121	90 to 250	90 to 250	N/A			
Frequency (Hz)		49.8 to 60.2	47 to 440	47 to 440	N/A			
Power Consumption 20 VA maximum								

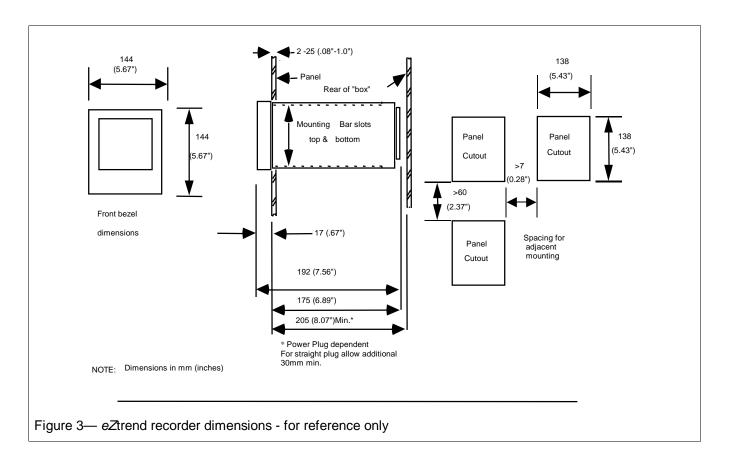
^{*} The maximum rating only applies up to 104°F (40°C). For higher temperatures, the RH specification is derated to maintain constant moisture content.



Recorder Wiring

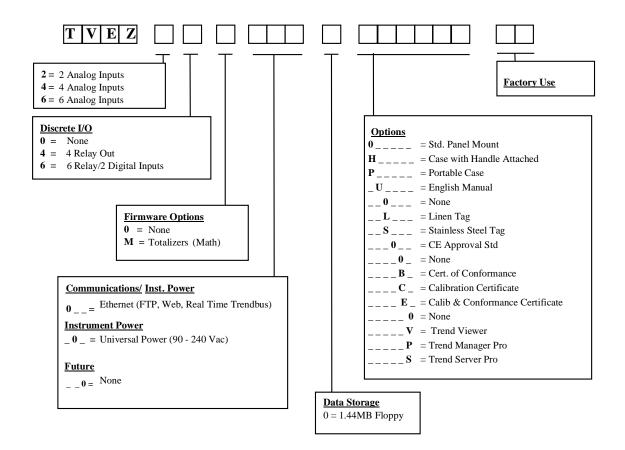
Accepts T/C, mV, V, mA, RTD IEC Power Plug for AC Power Accepts up to 6 Alarm Outputs/2 Digital





Ordering Information

For complete ordering information, request Model Selection Guide 43-TV-16-08 Honeywell offers a full line of sensors and transmitters that produce a compatible range of dc voltage or current signals which can be used as inputs to the *e*Ztrend Recorder.



WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

43-TV-03-08 Page 8

ARGENTINA

HONEYWELL S.A.I.C. BELGRANO 1156 **BUENOS AIRES ARGENTINA** Tel.: 54 1 383 9290

ASIA PACIFIC

HONEYWELL ASIA PACIFIC Inc. Room 3213-3225 Sun Kung Kai Centre N° 30 Harbour Road WANCHAL HONG KONG Tel.: 852 829 82 98

AUSTRALIA

HONEYWELL LIMITED 5 Thomas Holt Drive North Ryde Sydney **NSW AUSTRALIA 2113** Tel.: 61 2 353 7000

HONEYWELL AUSTRIA G.m.b.H. Handelskai 388 A1020 VIENNA AUSTRIA

Tel.: 43 1 727 800

BEI GIUM

HONEYWELL S.A. 3 Avenue de Bourget B-1140 BRUSSELS **BELGIUM**

Tel.: 32 2 728 27 11

BR A7II

HONEYWELL DO BRA-ZIL AND CIA Rua Jose Alves Da Chunha Lima 172 **BUTANTA** 05360.050 SAO PAULO SP BRAZIL

Tel.: 55 11 819 3755

BULGARIA

HONEYWELL EOOD 14, Iskarsko Chausse **POB 79** BG-1592 Sofia BULGARIA Tel: 359-791512/794027/

792198 CANADA

HONEYWELL The Honeywell Centre 155 Gordon Baker Road Toronto, Ontario M2H 3N7 Tel.: 416-502-4666

CZECH REPUBLIC

HONEYWELL, Spol.s.r.o. Budejovicka 1 140 21 Prague 4

Czech Republic Tel.: 42 2 6112 3434

DENMARK HONEYWELL A/S Automatikvej 1 DK 2860 Soeborg DENMARK

Tel.: 45 39 55 56 58

FINLAND

HONEYWELL OY Ruukintie 8 FIN-02320 ESPOO 32 FINLAND Tel.: 358 0 3480101

FRANCE

HONEYWELL S.A. Bâtiment « le Mercury » Parc Technologique de St Aubin Route de l'Orme (CD 128) 91190 SAINT-AUBIN FRANCE Tel from France:

01 60 19 80 00 From other countries: 33 1 60 19 80 00

GERMANY

HONEYWELL AG Kaiserleistrasse 39 D-63067 OFFENBACH **GERMANY** Tel.: 49 69 80 64299

HUNGARY

HONEYWELL Kft Gogol u 13 H-1133 BUDAPEST HUNGARY Tel.: 36 1 451 43 00

ICELAND

HONEYWELL Hataekni .hf Armuli 26 PO Box 8336 128 reykjavik Iceland

ITALY

HONEYWELL S.p.A. Via P. Gobetti, 2/b 20063 Cernusco Sul Naviglio ITALY

Tel.: 39 02 92146 1

MEXICO

HONEYWELL S.A. DE AV. CONSTITUYENTES 900

COL. LOMAS ALTAS 11950 MEXICO CITY

MEXICO Tel: 52 5 259 1966

THE **NETHERLANDS**

HONEYWELL BV Laaderhoogtweg 18 1101 EA AMSTERDAM ZO

THE NETHERLANDS Tel: 31 20 56 56 911

NORWAY

HONEYWELL A/S Askerveien 61 PO Box 263 N-1371 ASKER NORWAY Tel.: 47 66 76 20 00

POLAND

HONEYWELL Sp.z.o.o UI Domainewksa 41 02-672 WARSAW **POLAND**

Tel.: 48 22 606 09 00

PORTUGAL

HONEYWELL PORTUGAL LDA Edificio Suecia II Av. do Forte nr 3 - Piso 3 2795 CARNAXIDE **PORTUGAL** Tel.: 351 1 424 50 00

REPUBLICOF

IRELAND HONEYWELL Unit 1 Robinhood Business Park Robinhood Road **DUBLIN 22**

REPUBLICOF

Republic of Ireland

Tel: 353 1 4565944

SINGAPORE HONEYWELL PTE LTD BLOCK 750E CHAI CHEE ROAD 06-01 CHAI CHEE IND.

PARK 1646 SINGAPORE REP. OF SINGAPORE

Tel.: 65 2490 100

REPUBLIC OF SOUTH

HONEYWELL Southern Africa PO BOX 138 Milnerton 7435 REPUBLIC OF SOUTH **AFRICA**

Tel.: 27 11 805 12 01 HONEYWELL Office

ROMANIA

Bucharest 147 Aurel Vlaicu Str., Sc.Z., Apt 61/62 R-72921 Bucharest **ROMANIA**

Tel40-1 211 00 76/

211 79 RUSSIA

HONEYWELL INC 4 th Floor Administrative Builiding of AO "Luzhniki" Management 24 Luzhniki

119048 Moscow RUSSIA

Tel: 7 095 796 98 00/01

SLOVAKIA

HONEYWELL Ltd Mlynske nivy 73 PO Box 75 820 07 BRATISLAVA 27 SI OVAKIA Tel.: 421 7 52 47 400/

425 **SPAIN**

HONEYWELL S.A Factory Josefa Valcarcel, 24 28027 MADRID SPAIN Tel.: 34 91 31 3 61 00 SWEDEN

HONEYWELL A.B. S-127 86 Skarholmen STOCKHOLM SWEDEN Tel.: 46 8 775 55 00

SWITZERLAND

HONEYWELL A.G. Hertistrasse 2 8304 WALLISELLEN **SWITZERLAND** Tel.: 41 1 831 02 71

TURKEY

HONEYWELL Otomasyon ve Kontrol Sistemlen San ve Tic A.S. (Honeywell Turkey A.S.) Emirhan Cad No 144 Barbaros Plaza C. Blok

Kat 18

Dikilitas 80700 Istanbul

TURKEY

Tel: 90-212 258 18 30

UNITED KINGDOM

HONEYWELL

Unit 1,2 &4 Zodiac House Calleva Park Berkshire RG7 8HW UNITED KINGDOM

Tel: 44 118 906 2600

U.S.A.

HONEYWELL INC. 1100 VIRGINIA DRIVE FT. WASHINGTON PA 19034-3260 U.S.A.

Tel.: 1-800-343-0228

VENEZUELA HONEYWELL CA

APARTADO 61314 1060 CARACAS VENEZUELA

Tel.: 58 2 239 0211

Honeywell

Sensing and Control

Honeywell 11 West Spring Street Freeport, IL 61032