VAISALA

Order form
Orderer

Valid from 3rd April 2003
Order no.

HMP231 Humidity and Temperature Transmitter

For wall mounting

Vaisala HUMICAP® Humidity and Temperature Transmitter			**HMP231**			**A**											**A**			PRICE
Transmitter type	**RH+T**			**A**																
	RH+T+Td			*B*																
	RH+T+a+Tw+x			*C*																
	RH+T+Td+a+Tw+x+h			*D*																
	RH+T+h			*F*																
Display	**no display**				**1**															
	display on transmitter cover				*2*															
Probe length	**120 mm**					**A**														
Power supply & connectors	**24 V, no connectors**						**0**													
Using serial interface:	*24 V, shared connector for power supply and analog outputs*						*4*													
	24 V, connector for RS232C						*8*													
	24 V, 2 connectors: RS232C and analog outputs+power supply						*9*													
	24 V, 2 connectors shared for power supply and RS485						*9*													
Serial interface	**RS 232C**							**A**												
	RS 485/RS 422							*B*												
	current loop							*C*												
Sensor protection	**sintered stainless steel filter (16452)**								**1**											
	PPS plastic grid & stainless steel netting (16720HM)								**2**											
	PPS plastic grid (16562)								**3**											
Analog output signals (Ch1 and Ch2)	**4...20 mA**									**A**	**A**									
	0...20 mA									**B**	**B**									
	0...1 V									**C**	**C**									
	0...5 V									**D**	**D**									
	0...10 V									**E**	**E**									
			channel 1																	
			channel 2																	
Parameters for the analog outputs (If available in the chosen transmitter type) (Ch1 and Ch2)	**RH**	**(0...100 %RH)**										**1**	**1**							
	T	**(range: see below)**										**2**	**2**							
	Td	**(-40...+60 °C)**	**(-40...+140 °F)**									**3**	**3**							
	a	**(0...160 g/m3)**	**(0...69.9 gr/ft3)**									**4**	**4**							
	Tw	**(0...+60 °C)**	**(+32...+140 °F)**									**5**	**5**							
	x	**(0...160 g/kg d.a.)**	**(0...1120 gr/lb)**									**6**	**6**							
	h	**(-40...+460 kJ/kg)**	**(-17.2...+197.8 Btu/lb)**									**7**	**7**							
			channel 1																	
			channel 2																	
Analog output range for temperature	**-20...+60 °C**	**(-4...+140 °F)**												**A**						
	-40...+60 °C	**(-40...+140 °F)**												**B**						
	0...+60 °C	**(+32...+140 °F)**												**C**						
Units (local display and serial interface)	**metric**														**1**					
	non-metric														**2**		**A**			
Regaining option *) and sensor type	**no regaining**	**(HUMICAP K)**																**3**		
	regaining	*(HUMICAP KC)*																*2*		
Manual language	**No manual**																		**A**	
	English																		**B**	
	German																		**C**	
	French																		**D**	
	Finnish																		**E**	
																			TOTAL	
																			QTY	
																			TOTAL VALUE	

*) Humidity sensor regaining can be used to reduce the effects of some chemical contaminants.
If the regaining option is chosen, the sensor must be protected either with a sintered filter or with a PPS plastic grid with steel netting; the PPS plastic grid can not be used.
For further information about this option, please see product data sheet or contact Your Vaisala representative.

Selections in bold are included in the prices of the basic versions.
Selections in italic are available at an extra price.

Example of order code with typical settings:

HMP231	**A**	**2**	**A**	**0**	**A**	**1**	**A**	**A**	**1**	**2**	**A**	**1**	**A**	**3**	**B**

End customer: _____

VAISALA

Order form
Orderer

Valid from 3rd April 2003
Order no.

HMP233 Humidity and Temperature Transmitter

With compact probe

Vaisala HUMICAP® Humidity and Temperature Transmitter		**HMP233**															PRICE
Transmitter type	**RH+T**		**A**														
	RH+T+Td		*B*														
	RH+T+a+Tw+x		*C*														
	RH+T+Td+a+Tw+x+h		*D*														
	RH+T+h		*F*														
Display	**no display**			**1**													
	display on transmitter cover			*2*													
Probe cable length	**2 m cable, +80 °C**	**(176 °F)**			**A**												
	5 m cable, +80 °C	*(176 °F)*			*B*												
	10 m cable, +80 °C	*(176 °F)*			*C*												
	2 m cable, +120 °C	*(+248°F)*			*D*												
	5 m cable, +120 °C	*(+248°F)*			*E*												
	10 m cable, +120 °C	*(+248°F)*			*F*												
Power supply, alarm output & connectors	**24 V, no connectors**					**0**											
	115 V, no connectors					*1*											
	230 V, no connectors					*2*											
	24 V, + alarm output unit (no connectors)					*3*											
	24 V, shared connector for power supply and analog outputs					*4*											
	24 V, as above + alarm output unit not on connector					*5*											
	115 V, connector for analog outputs					*6*											
	230 V, connector for analog outputs					*7*											
Using serial interface:	*24 V, connector for RS232C*					*8*											
	24 V, 2 connectors: RS232C and analog outputs+power supply					*9*											
	24 V, 2 connectors shared for power supply and RS485					*9*											
Serial interface	**RS 232C**						**A**										
	RS 485/RS 422						*B*										
	current loop						*C*										
Sensor protection	**PPS plastic grid & stainless steel netting (16720HM)**							**2**									
Analog output signals (Ch1 and Ch2)	**4...20 mA**								**A**	**A**							
	0...20 mA								**B**	**B**							
	0...1 V								**C**	**C**							
	0...5 V								**D**	**D**							
	0...10 V								**E**	**E**							
									channel 1								
									channel 2								
Parameters for the analog outputs (If available in the chosen tranmitter type) (Ch1 and Ch2)	**RH**	**(0...100 %RH)**									**1**	**1**					
	T	**(range: see below)**									**2**	**2**					
	Td	**(-40...+100 °C)**	**(-40...+212 °F)**								**3**	**3**					
	a	**(0...600 g/m3)**	**(0...262 gr/ft3)**								**4**	**4**					
	Tw	**(0...+100 °C)**	**(+32...+212 °F)**								**5**	**5**					
	x	**(0...500 g/kg d.a.)**	**(0...3500 gr/lb d.a.)**								**6**	**6**					
	h	**(-40...1500 kJ/kg)**	**(-17.2...644.9 Btu/lb)**								**7**	**7**					
			channel 1														
			channel 2														
Analog output range for temperature	**-20...+80 °C**	**(-4...+176 °F)**											**A**				
	-20...+120 °C	**(-4...+248 °F)**											**B**				
	-40...+80 °C	**(-40...+176 °F)**											**C**				
	-40...+120 °C	**(-40...+248 °F)**											**D**				
	-40...+60 °C	**(-40...+140 °F)**											**E**				
	0...+100 °C	**(+32...+212 °F)**											**F**				
Units (local display and serial interface)	**metric**													**1**			
	non-metric													**2**			
Installation kit for duct mounting	**no**														***A***		
	yes: for +80 °C cable	*(+176 °F)*													*B*		
	yes: for +120 °C cable	*(+248 °F)*													*C*		
Regaining option *) and sensor type	**no regaining**	**(HUMICAP K)**														**3**	
	regaining	*(HUMICAP KC)*														*2*	
Manual language	**No manual**																**A**
	English																**B**
	German																**C**
	French																**D**
	Finnish																**E**
																TOTAL	
																QTY	
																TOTAL VALUE	

*) Humidity sensor regaining can be used to reduce the effects of some chemical contaminants.
If the regaining option is chosen, the sensor must be protected either with a sintered filter or with a PPS plastic grid with steel netting; the PPS plastic grid can not be used.
Please note that if mains power (115/230V) is selected regaining cannot be used.
For further information about this option, please see product data sheet or contact Your Vaisala representative.

Selections in bold are included in the prices of the basic versions.
Selections in italic are available at an extra price.

Example of order code with typical settings:

HMP233	A	2	A	0	A	2	A	A	1	2	A	1	A	3	B

End customer: _____

VAISALA

Order form
Orderer

Valid from 3rd April 2003
Order no.

HMP234 Humidity and Temperature Transmitter

With pressure tight high temperature probe

Vaisala HUMICAP® Humidity and Temperature Transmitter	**HMP234**						**1**							**A**			PRICE
Transmitter type	**RH+T**	**A**															
	RH+T+Td	*B*															
	RH+T+a+Tw+x	*C*															
	RH+T+Td+a+Tw+x+h	*D*															
	RH+T+h	*F*															
Display	**no display**		**1**														
	display on transmitter cover		*2*														
Probe cable length	**2 m cable, +180 °C (+356 °F)**			**A**													
	5 m cable, +180 °C (+356 °F)			*B*													
	10 m cable, +180 °C (+356 °F)			*C*													
Power supply, alarm output & connectors	**24 V, no connectors**				**0**												
	115 V, no connectors				*1*												
	230 V, no connectors				*2*												
	24 V, + alarm output unit (no connectors)				*3*												
	24 V, shared connector for power supply and analog outputs				*4*												
	24 V, as above + alarm output unit not on connector				*5*												
	115 V, connector for analog outputs				*6*												
	230 V, connector for analog outputs				*7*												
Using serial interface:	*24 V, connector for RS232C*				*8*												
	24 V, 2 connectors: RS232C and analog outputs+power supply				*9*												
	24 V, 2 connectors shared for power supply and RS485				*9*												
Serial interface	**RS 232C**					**A**											
	RS 485/RS 422					*B*											
	current loop					*C*											
Sensor protection	**sintered stainless steel filter (16452)**						**1**										
Analog output signals (Ch1 and Ch2)	**4...20 mA**							**A**	**A**								
	0...20 mA							**B**	**B**								
	0...1 V							**C**	**C**								
	0...5 V							**D**	**D**								
	0...10 V							**E**	**E**								
				channel 1													
				channel 2													
Parameters for the analog outputs (Ch1 and Ch2)	**RH (0...100 %RH)**									**1**	**1**						
	T (range: see below)									**2**	**2**						
	Td (-40...+100 °C) (-40...+212 °F)									**3**	**3**						
	a (0...600 g/m3) (0...+262 gr/ft3)									**4**	**4**						
	Tw (0...+100 °C) (+32...+212 °F)									**5**	**5**						
	x (0...500 g/kg d.a.) (0...3500 gr/lb d.a.)									**6**	**6**						
	h (-40...1500 kJ/kg) (-17.2...644.9 Btu/lb)									**7**	**7**						
			channel 1														
			channel 2														
Analog output range for temperature	**-20...+80 °C (-4...+176 °F)**											**A**					
	-20...+120 °C (-4...+248 °F)											**B**					
	-20...+180 °C (-4...+356 °F)											**C**					
	-40...+80 °C (-40...+176 °F)											**D**					
	-40...+120 °C (-40...+248 °F)											**E**					
	-40...+180 °C (-40...+356 °F)											**F**					
Units (local display and serial interface)	**metric**												**1**				
	non-metric												**2**	**A**			
Regaining option *) and sensor type	**no regaining (HUMICAP K)**														**3**		
	regaining (HUMICAP KC)														*2*		
Manual language	**No manual**															**A**	
	English															**B**	
	German															**C**	
	French															**D**	
	Finnish															**E**	
																TOTAL	
																QTY	
																TOTAL VALUE	

*) Humidity sensor regaining can be used to reduce the effects of some chemical contaminants.
Please note that if mains power (115/230V) is selected regaining cannot be used.
For further information about this option, please see product data sheet or contact Your Vaisala representative.

Selections in bold are included in the prices of the basic versions.
Selections in italic are available at an extra price.

Example of order code with typical settings:

HMP234	A	2	A	0	A	1	A	A	1	2	A	1	A	3	B

End customer: _____

VAISALA

Order form
Orderer

Valid from 3rd April 2003
Order no.

HMP235 Humidity and Temperature Transmitter

With high temperature probe

Vaisala HUMICAP® Humidity and Temperature Transmitter		**HMP235**															PRICE
Transmitter type	**RH+T**		**A**														
	RH+T+Td		*B*														
	RH+T+a+Tw+x		*C*														
	RH+T+Td+a+Tw+x+h		*D*														
	RH+T+h		*F*														
Display	**no display**			**1**													
	display on transmitter cover			*2*													
Probe cable length	**2 m cable, +180 °C**	**(+356 °F)**			**A**												
	5 m cable, +180 °C	*(+356 °F)*			*B*												
	10 m cable, +180 °C	*(+356 °F)*			*C*												
Power supply, alarm output & connectors	**24 V, no connectors**					**0**											
	115 V, no connectors					*1*											
	230 V, no connectors					*2*											
	24 V, + alarm output unit (no connectors)					*3*											
	24 V, shared connector for power supply and analog outputs					*4*											
	24 V, as above + alarm output unit not on connector					*5*											
	115 V, connector for analog outputs					*6*											
	230 V, connector for analog outputs					*7*											
Using serial interface:	*24 V, connector for RS232C*					*8*											
	24 V, 2 connectors: RS232C and analog outputs+power supply					*9*											
	24 V, 2 connectors shared for power supply and RS485					*9*											
Serial interface	**RS 232C**						**A**										
	RS 485/RS 422						*B*										
	current loop						*C*										
Sensor protection	**sintered stainless steel filter (16452)**							**1**									
	PPS plastic grid & stainless steel netting (16720HM)							**2**									
Analog output signals (Ch1 and Ch2)	**4...20 mA**								**A**	**A**							
	0...20 mA								**B**	**B**							
	0...1 V								**C**	**C**							
	0...5 V								**D**	**D**							
	0...10 V								**E**	**E**							
			channel 1														
			channel 2														
Parameters for the analog outputs (If available in the chosen transmitter type) (Ch1 and Ch2)	**RH**	**(0...100 %RH)**									**1**	**1**					
	T	**(range: see below)**									**2**	**2**					
	Td	**(-40...+100 °C)**	**(-40...+212 °F)**								**3**	**3**					
	a	**(0...600 g/m3)**	**(0...+262 gr/ft3)**								**4**	**4**					
	Tw	**(0...+100 °C)**	**(+32...+212 °F)**								**5**	**5**					
	x	**(0...500 g/kg d.a.)**	**(0...3500 gr/lb d.a.)**								**6**	**6**					
	h	**(-40...1500 kJ/kg)**	**(-17.2...644.9 Btu/lb)**								**7**	**7**					
			channel 1														
			channel 2														
Analog output range for temperature	**-20...+180 °C**	**(-4...+356 °F)**											**A**				
	0...+180 °C	**(+32...+356 °F)**											**B**				
Units (local display and serial interface)	**metric**													**1**			
	non-metric													**2**			
Installation kit	**no installation kit**														**A**		
	aluminium flange														*B*		
	steel flange														*C*		
Regaining option *) and sensor type	**no regaining**	**(HUMICAP K)**														**3**	
	regaining	*(HUMICAP KC)*														*2*	
Manual language	**No manual**																**A**
	English																**B**
	German																**C**
	French																**D**
	Finnish																**E**
																TOTAL	
																QTY	
																TOTAL VALUE	

*) Humidity sensor regaining can be used to reduce the effects of some chemical contaminants.
If the regaining option is chosen, the sensor must be protected either with a sintered filter or with a PPS plastic grid with steel netting; the PPS plastic grid can not be used.
Please note that if mains power (115/230V) is selected regaining cannot be used.
For further information about this option, please see product data sheet or contact Your Vaisala representative.

Selections in bold are included in the prices of the basic versions.
Selections in italic are available at an extra price.

Example of order code with typical settings:

HMP235	**A**	**2**	**A**	**0**	**A**	**1**	**A**	**A**	**1**	**2**	**A**	**1**	**A**	**3**	**B**

End customer: _____

VAISALA

Order form
Orderer

Valid from 3rd April 2003
Order no.

HMP237 Humidity and Temperature Transmitter

With compact probe for demanding environments

Vaisala HUMICAP® Humidity and Temperature Transmitter		**HMP237**															PRICE
Transmitter type	**RH+T**		**A**														
	RH+T+Td		*B*														
	RH+T+a+Tw+x		*C*														
	RH+T+Td+a+Tw+x+h		*D*														
	RH+T+h		*F*														
Display	**no display**			**1**													
	display on transmitter cover			*2*													
Probe cable length	**2 m cable, +180 °C (+356 °F)**				**A**												
	5 m cable, +180 °C (+356 °F)				*B*												
	10 m cable, +180 °C (+356 °F)				*C*												
Power supply, alarm output & connectors	**24 V, no connectors**					**0**											
	115 V, no connectors					*1*											
	230 V, no connectors					*2*											
	24 V, + alarm output unit (no connectors)					*3*											
	24 V, shared connector for power supply and analog outputs					*4*											
	24 V, as above + alarm output unit not on connector					*5*											
	115 V, connector for analog outputs					*6*											
	230 V, connector for analog outputs					*7*											
Using serial interface:	*24 V, connector for RS232C*					*8*											
	24 V, 2 connectors: RS232C and analog outputs+power supply					*9*											
	24 V, 2 connectors shared for power supply and RS485					*9*											
Serial interface	**RS 232C**						**A**										
	RS 485/RS 422						*B*										
	current loop						*C*										
Sensor protection	**sintered stainless steel filter (16452)**							**1**									
	PPS plastic grid & stainless steel netting (16720HM)							**2**									
Analog output signals (Ch1 and Ch2)	**4...20 mA**								**A**	**A**							
	0...20 mA								**B**	**B**							
	0...1 V								**C**	**C**							
	0...5 V								**D**	**D**							
	0...10 V								**E**	**E**							
					channel 1												
					channel 2												
Parameters for the analog outputs (If available in the chosen transmitter type) (Ch1 and Ch2)	**RH**	**(0...100 %RH)**									**1**	**1**					
	T	**(range: see below)**									**2**	**2**					
	Td	**(-40...+100 °C)**	**(-40...+212 °F)**								**3**	**3**					
	a	**(0...600 g/m3)**	**(0...+262 gr/ft3)**								**4**	**4**					
	Tw	**(0...+100 °C)**	**(+32...+212 °F)**								**5**	**5**					
	x	**(0...500 g/kg d.a.)**	**(0...3500 gr/lb d.a.)**								**6**	**6**					
	h	**(-40...1500 kJ/kg)**	**(-17.2...644.9 Btu/lb)**								**7**	**7**					
			channel 1														
			channel 2														
Analog output range for temperature	**-20...+80 °C**	**(-4...+176 °F)**											**A**				
	-20...+120 °C	**(-4...+248 °F)**											**B**				
	-20...+180 °C	**(-4...+356 °F)**											**C**				
	-40...+80 °C	**(-40...+176 °F)**											**D**				
	-40...+120 °C	**(-40...+248 °F)**											**E**				
	-40...+180 °C	**(-40...+356 °F)**											**F**				
	0...+100 °C	**(+32...+212 °F)**											**G**				
Units (local display and serial interface)	**metric**													**1**			
	non-metric													**2**			
Installation kit	**no**														**A**		
	for duct mounting														*B*		
Regaining option *) and sensor type	**no regaining**	**(HUMICAP K)**														**3**	
	regaining	*(HUMICAP KC)*														2	
Manual language	**No manual**																**A**
	English																**B**
	German																**C**
	French																**D**
	Finnish																**E**
																TOTAL	
																QTY	
																TOTAL VALUE	

*) Humidity sensor regaining can be used to reduce the effects of some chemical contaminants.
If the regaining option is chosen, the sensor must be protected either with a sintered filter or with a PPS plastic grid with steel netting; the PPS plastic grid can not be used.
Please note that if mains power (115/230V) is selected regaining cannot be used.
For further information about this option, please see product data sheet or contact Your Vaisala representative.

Selections in bold are included in the prices of the basic versions.
Selections in italic are available at an extra price.

Example of order code with typical settings:

HMP237	**A**	**2**	**A**	**0**	**A**	**1**	**A**	**A**	**1**	**2**	**B**	**1**	**A**	**3**	**B**

End customer: _____

VAISALA

Order form
Orderer

Valid from 3rd April 2003
Order no.

HMP238 Humidity and Temperature Transmitter

With pressure tight high temperature probe for pipeline installations

Vaisala HUMICAP® Humidity and Temperature Transmitter		**HMP238**						**1**										PRICE
Transmitter type	**RH+T**																**A**	
	RH+T+Td																*B*	
	RH+T+a+Tw+x																*C*	
	RH+T+Td+a+Tw+x+h																*D*	
	RH+T+h																*F*	
Display	**no display**															**1**		
	display on transmitter cover															*2*		
Probe cable length	**2 m cable, +180 °C**	**(+356 °F)**													**A**			
	5 m cable, +180 °C	*(+356 °F)*													*B*			
	10 m cable, +180 °C	*(+356 °F)*													*C*			
Power supply, alarm output & connectors	**24 V, no connectors**												**0**					
	115 V, no connectors												*1*					
	230 V, no connectors												*2*					
	24 V, + alarm output unit (no connectors)												*3*					
	24 V, shared connector for power supply and analog outputs												*4*					
	24 V, as above + alarm output unit not on connector												*5*					
	115 V, connector for analog outputs												*6*					
	230 V, connector for analog outputs												*7*					
Using serial interface:	*24 V, connector for RS232C*												*8*					
	24 V, 2 connectors: RS232C and analog outputs+power supply												*9*					
	24 V, 2 connectors shared for power supply and RS485												*9*					
Serial interface	**RS 232C**											**A**						
	RS 485/RS 422											*B*						
	current loop											*C*						
Sensor protection	**sintered stainless steel filter (16452)**							**1**										
Analog output signals (Ch1 and Ch2)	**4...20 mA**								**A**	**A**								
	0...20 mA								**B**	**B**								
	0...1 V								**C**	**C**								
	0...5 V								**D**	**D**								
	0...10 V								**E**	**E**								
			channel 1															
			channel 2															
Parameters for the analog outputs (If available in the chosen transmitter type)	**RH**	**(0...100 %RH)**									**1**	**1**						
	T	**(range: see below)**									**2**	**2**						
	Td	**(-40...+100 °C)**	**(-40...+212 °F)**								**3**	**3**						
	a	**(0...600 g/m3)**	**(0...+262 gr/ft3)**								**4**	**4**						
	Tw	**(0...+100 °C)**	**(+32...+212 °F)**								**5**	**5**						
	x	**(0...500 g/kg d.a.)**	**(0...3500 gr/lb d.a.)**								**6**	**6**						
	h	**(-40...1500 kJ/kg)**	**(-17.2...644.9 Btu/lb)**								**7**	**7**						
(Ch1 and Ch2)			channel 1															
			channel 2															
Analog output range for temperature	**-20...+80 °C**	**(-4...+176 °F)**											**A**					
	-20...+120 °C	**(-4...+248 °F)**											**B**					
	-20...+180 °C	**(-4...+356 °F)**											**C**					
	-40...+80 °C	**(-40...+176 °F)**											**D**					
	-40...+120 °C	**(-40...+248 °F)**											**E**					
	-40...+180 °C	**(-40...+356 °F)**											**F**					
Units (local display and serial interface)	**metric**													**1**				
	non-metric													**2**				
Installation kit	**no installation kit**														**A**			
	ball valve set for pipeline installations														*D*			
Regaining option *) and sensor type	**no regaining**	**(HUMICAP K)**														**3**		
	regaining	*(HUMICAP KC)*														*2*		
Manual language	**No manual**																***A***	
	English																***B***	
	German																***C***	
	French																***D***	
	Finnish																***E***	
																	TOTAL	
																	QTY	
																	TOTAL VALUE	

*) Humidity sensor regaining can be used to reduce the effects of some chemical contaminants.
If the regaining option is chosen, the sensor must be protected either with a sintered filter or with a PPS plastic grid with steel netting; the PPS plastic grid can not be used.
Please note that if mains power (115/230V) is selected regaining cannot be used.
For further information about this option, please see product data sheet or contact Your Vaisala representative.

Selections in bold are included in the prices of the basic versions.
Selections in italic are available at an extra price.

Example of order code with typical settings:

HMP235	**A**	**2**	**A**	**0**	**A**	**1**	**A**	**A**	**1**	**2**	**A**	**1**	**A**	**3**	**B**

End customer: _____