

Measuring Module Type MK-PH015X for:

Stratos Pro Type A2..X... Stratos Multi Type E401X...  
 IECEx, ATEX Control drawing 212.002-100 page 1 IECEx, ATEX Control drawing 212.502-100 page 1  
 cFMus Control drawing 212.002-300 cFMus Control drawing 212.502-100 page 2

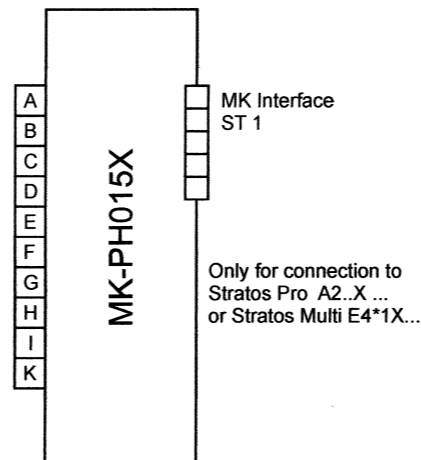
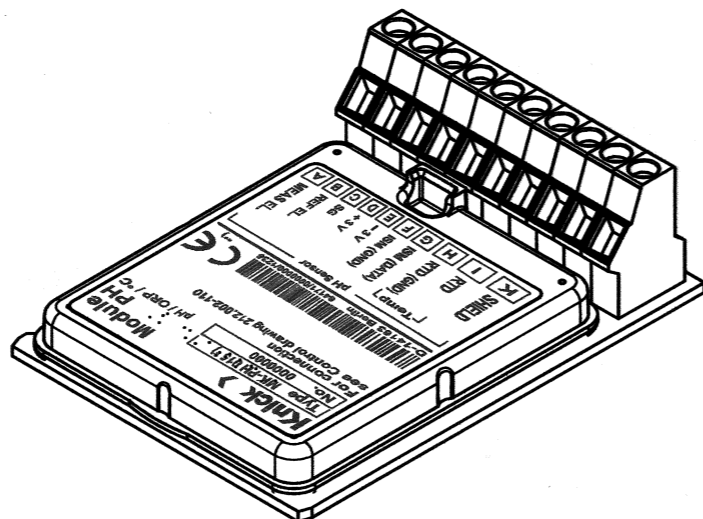
MK interface	In type of protection intrinsic safety, only for connection to Stratos® A2..X..., E401X...										
Explosive gas atmosphere	Ex ia IIC, IIB and IIA CI I Zone 0, Grp IIC, IIB and IIA CI I Div 1, Grp ABCD			Ex ia IIC CI I Zone 0, Grp IIC CI I Div 1, Grp AB		Ex ia IIB CI I Zone 0, Grp IIB CI I Div 1, Grp C		Ex ia IIA CI I Zone 0, Grp IIA CI I Div 1, Grp D			
Explosive dust atmosphere	Ex ia IIIC Zone 20 Grp IIIC CI II, III Div 1, Grp EFG					Ex ia IIIC Zone 20 Grp IIIC CI II, III Div 1, Grp EFG					
	Uo, Voc (V)	Io, Isc (mA)	Po (mW)	Co, Ca (nF)	Lo, La (mH)	Co, Ca (µF)	Lo, La (mH)	Co, Ca (µF)	Lo, La (mH)		
pH Measuring Loop (Terminals A, B, C, K)	15	19.9	49.8	553	90	3.52	320	13.9	610	Linear characteristic	
Temperature Measuring Loop (Terminals H, I)	10	18.3	45.7	2.87 µF	95	19.8	350	99	630	Linear characteristic	
pH/Temperature Measuring Loop (Terminals A, B, C, H, I, K)	15	38.2	95.5	432	23	3.4	90	13.8	180	Linear characteristic	
ISM Measuring Loop (Terminals F, G)	15	10.6	26.6	580	300	3.55	1000	14	1000	Linear characteristic	
pH/Temperature/Supply Measuring Loop (Terminals A, B, C, D, E, H, I, K)	15	93.8	200	379	4	3.35	19	13.8	40	Linear characteristic	
pH/ISM/Temperature/Supply Measuring Loop (Terminals A, B, C, D, E, F, G, H, I, K)				Ex ic IIC, IIIC		Ex ic IIB, IIIB		Ex ic IIA, IIIA			
	CI I, Div 2, Grp A, B, C & D CI II, III, Div 2, Grp F & G CI I, Zone 2, Grp IIC										
	3	6	18	1000 µF	1000	1000	1000	1000	1000	Linear characteristic	

The measuring circuits are galvanically connected  
 Do not mix different Types of Protection

Módulo de Medição Tipo MK-PH015X para Stratos Tipo A2..X...  
 Desenho de controle INMETRO 212.002-100 page 3

Interface MK	Em tipo de proteção: „segurança intrínseca“, somente para conexão a Stratos® A2..X...										
Atmosfera explosiva de gás	Ex ia IIC, IIB and IIA			Ex ia IIC		Ex ia IIB		Ex ia IIA			
Atmosfera explosiva de poeira	Ex ia IIIC					Ex ia IIIC					
	Uo, Voc (V)	Io, Isc (mA)	Po (mW)	Co, Ca (nF)	Lo, La (mH)	Co, Ca (µF)	Lo, La (mH)	Co, Ca (µF)	Lo, La (mH)		
Malha de Medição de pH (Terminais A, B, C, K)	15	19.9	49.8	553	90	3.52	320	13.9	610	Característica linear	
Malha de Medição de Temperatura (Terminais H, I)	10	18.3	45.7	2.87 µF	95	19.8	350	99	630	Característica linear	
Malha de Medição de pH/Temperatura (Terminais A, B, C, H, I, K)	15	38.2	95.5	432	23	3.4	90	13.8	180	Característica linear	
Malha de Medição de ISM (Terminais F, G)	15	10.6	26.6	580	300	3.55	1000	14	1000	Característica linear	
Malha de Medição de pH/Temperatura/Alimentação (Terminais A, B, C, D, E, H, I, K)	15	93.8	200	379	4	3.35	19	13.8	40	Característica linear	
Malha de Medição de pH/ISM/Temperatura/Alimentação (Terminais A, B, C, D, E, F, G, H, I, K)				Ex ic IIC, IIIC		Ex ic IIB, IIIB		Ex ic IIA, IIIA			
	3 6 18 1000 µF 1000 1000 1000 1000 1000										Característica linear

Os circuitos de medição são conectados galvanicamente  
 Não misture diferentes tipos de proteção.



WARNING - SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY  
 WARNING - SUBSTITUTION OF COMPONENTS MAY IMPAIR THE SUITABILITY FOR DIV 2 / ZONE 2  
 WARNING - DO NOT SEPARATE MODULE WHEN ENERGIZED

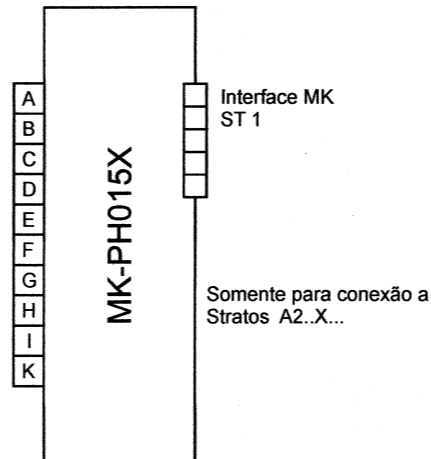
Notes:

IECEx, ATEX, cFMus

- When installed in Stratos the Intrinsically Safe Equipment connecting to A, B, C, D, E, F, G, H, I, K must be IECEx or ATEX or NRTL Approved or be a simple Apparatus.
- Simple Apparatus is defined as a device that does not generate more than 1.5 V, 0.1 A, or 25 mW.

cFMus

- The Intrinsic Safety Entity concept allows the interconnection of FM Approved intrinsically safe devices with entity parameters not specifically examined in combination as a systems when:  
 $U_o$  or  $V_{oc}$  or  $V_t \leq V_{max}$ ,  $I_o$  or  $I_{sc}$  or  $I_t \leq I_{max}$ ,  $P_o \leq P_t$ ,  $C_a$  or  $C_o \geq \sum C_i + \sum C_{cable}$   
 For inductance use either  $L_a$  or  $L_o \geq \sum L_i + \sum L_{cable}$  or  $L_e/R_e \leq (L_a/R_a \text{ or } L_o/R_o)$  and  $L_i/R_i \leq (L_a/R_a \text{ or } L_o/R_o)$
- Installation should be in accordance with ANSI/ISA RP12.06.01, "Installation of Intrinsically Safe Systems for Hazardous (Classified) Locations" and the National Electrical Code® (ANSI/NFPA 70), or with the Canadian Electrical Code for Hazardous Location as applicable.
- No revisions to drawing without prior FM Approvals authorisation.



AVISO A SUBSTITUIÇÃO DE COMPONENTES PODE PREJUDICAR A SEGURANÇA INTRÍNSECA  
 AVISO A SUBSTITUIÇÃO DE COMPONENTES PODE PREJUDICAR A EFICIÊNCIA EM ZONE 2  
 AVISO NÃO SEPARAR O MÓDULO QUANDO ENERGIZADO

Notas:

INMETRO

- Quando instalado em Stratos® Tipo A2..X...: O equipamento intrinsecamente seguro conectado a A, B, C, D, E, F, G, H, I, K precisa ter aprovação IECEx ou ATEX ou FM ou CSA ou INMETRO ou ser um Aparelho simples.
- Definição de Aparelho Simples: instrumento que não gera mais que 1,5 V, 0,1 A ou 25 mW.

Nr.	Änderungen	Datum	Bearb.	Freigabe	Zul. Abweichungen für Maße ohne Toleranzangabe	Maßstab	Benennung	Blatt
8	Texts	13.10.21	kmn				MK-PH015X Control drawing	1
7	Texts	19.03.21	dam					
6	page1 „X“, page2 „B“	08.01.16	dam		Bearbeitet	28.05.2008		
5	Texts	21.09.15	dam		Geprüft	15.10.21		
4	Texts	04.09.12	dam		Freigabe	15.10.21		
3	INMETRO Texte	06.04.11	dam		Schutzvermerk nach ISO16016 beachten.		212.002-110	1
2	Texts	25.08.09	dam					
1	FM u. CSA	23.01.09	dam					
					<b>Knick</b>			
					Elektronische Messgeräte GmbH & Co. KG			

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