



07122E

STAHL

The Open HMI MT- 4x6-Tx and MT- 4x6-Fx are Panel PCs which can run any software and which are suitable for installation in hazardous areas of zones 2 and 22. The devices can also be used as thin clients in a remote terminal environment. As a standard, all Open HMIs are equipped with a touch screen and many interfaces, are based on the powerful Pentium / Celeron M technology (up to 1.6 GHz clock frequency), which makes them the most powerful devices on the market. The devices are of modular design and were uncompromisingly developed for tough industrial environments.

Open HMI

**Series MT- 406, MT- 416,
MT- 436, MT- 456**

- Modular and robustly
Panel PC-Systems
- Marine approvals by DNV
- Applications
 - Machines and package units
 - Tankfarm automation
 - For use on ships
 - Operator interfaces for
process automation
- Highlights
 - No fan or rotating parts
 - Modular and service friendly
design
 - Extended temperature range
for outdoor installation
 - Multilingual Windows XP
installation
 - System integrated touch-
screens with 150 language
layouts and login function
(Windows Login)
 - Many communication
interfaces
 - System backup and recovery
via USB-Stick
 - Useable in clean rooms
according GMP
- Installation in hazardous areas
worldwide
 - Zones 2 and 22

	Zones					
	0	1	2	20	21	22
Installation in			X			X

Selection Table					
Version	Display Size	Function keys	Interfaces	Ordering code	Weight kg
MT- 406 Basic unit, 4 GB Flash memory	10.4"	12 (10 Softkeys)	RS-232, RS-422/485	MT-406	12,150
MT- 416 Basic unit, 4 GB Flash memory	10.4"	12	RS-232, RS-422/485	MT-416	12,150
MT- 436 Basic unit, 4 GB Flash memory	15"	8	RS-232, RS-422/485	MT-436	15,400
MT- 456 Basic unit, 4 GB Flash memory	19"	8	RS-232, RS-422/485	MT-456	23,350
Note Please indicate the required add. to ordering code separately.					
Order number supplement					
Ethernet Version	Fiber Optic 100 Base Fx (Ex op is)			MT-4x6-FX	--
	Copper 10/100 Base Tx (Ex e)			MT-4x6-TX	--
Memory options	8 GB CF Flash memory			4x6-8GB	--
	16 GB CF Flash memory			4x6-16GB	--
	60 GB Hard Disc			4x6-60GB	--
	120 GB Hard Disc			4x6-120GB	--
Display	MT- 436 with High Brightness Display 650 cd/m ²			MT-436-HB	1,200
Interfaces	additional WCRi Interface for e.g. Wiegand Reader			MT-4xx-WCRi	--
	additional RSi Interface for e.g. Barcode Reader			MT-4xx-RSi	--
Memory upgrade	with 60 GB external Hard Disc in Ex d enclosure			USBc-Drive-60GB	11,000
	Intrinsically safe 4 GB USB drive, internal or as external USB stick			USBi-Drive-4GB	1,000
Ordering example	Version: MT- 436 with Ethernet optical fiber fitted in an enclosure V2A with rotating coupling on standpipe, completely mounted and for installation in Zone 2 Ordering: Pos. Ordering code 1 MT- 436 1.1 MT- 4x6-FX 2 HSG-x36-V2A 2.1 HSG-xx6-V2A-STF				



Technical Data

Explosion protection	Ⓢ II 3 (3) G Ex d e mb nA nL [nL] [op is] IIC T4 Ⓢ II 3 (2) G Ex d e mb nA nL [ib] [op is] IIC T4 Ⓢ II 3 (2) D Ex tD A22 IP65 T90 °C			
Ausführung	MT- 406	MT- 416	MT- 436	MT- 456
Display				
Specification	TFT-Color, 262.144 colours	TFT-Color, 262.144 colours	TFT-Color, 262.144 colours	TFT-Color, 262.144 colours
Size	10.4"	10.4"	15"	19"
Resolution	SVGA 800 x 600 pixels	SVGA 800 x 600 pixels	XGA 1024 x 768 pixels	SXGA 1280 x 1024 pixels
Backlight	CFL Backlight	CFL Backlight	CFL Backlight	CFL Backlight
Life	50,000 h at 25 °C	50,000 h at 25 °C	50,000 h at 25 °C	50,000 h at 25 °C
Brightness	350 cd / m ²	350 cd / m ²	250 cd / m ²	300 cd / m ²
Operation				
Touch Screen analog resistiv	8-wire Touch Screen	8-wire Touch Screen	8-wire Touch Screen	8-wire Touch Screen
Keyboard	Polyester on aluminium plate	Polyester on aluminium plate	Polyester on aluminium plate	Polyester on aluminium plate
Function keys	12	12	8	8
Soft keys	10	--	--	--
Alphanumerical and system keys	23 / 12	--	--	--
Additional keyboard	105 keys (optional)	105 keys (optional)	105 keys (optional)	105 keys (optional)
Trackball / Joystick	optional	optional	optional	optional
Interfaces				
Ethernet				
TX	10/100 Base-Tx	10/100 Base-Tx	10/100 Base-Tx	10/100 Base-Tx
FX	100 Base-Fx optical fiber (Ex op is)	100 Base-Fx optical fiber (Ex op is)	100 Base-Fx optical fiber (Ex op is)	100 Base-Fx optical fiber (Ex op is)
USB	2 Ex nA / 2 Ex i	2 Ex nA / 2 Ex i	2 Ex nA / 2 Ex i	2 Ex nA / 2 Ex i
Serial	2 x RS-232 or RS-422/485	2 x RS-232 or RS-422/485	2 x RS-232 or RS-422/485	2 x RS-232 or RS-422/485
Profibus				
MPI (optional)	direct connection	direct connection	direct connection	direct connection
Processor				
Version	Pentium M up to 1.6 GHz	Pentium M up to 1.6 GHz	Pentium M up to 1.6 GHz	Pentium M up to 1.6 GHz
RAM	1 GB	1 GB	1 GB	1 GB
Flash Disk	4 GB Expansion up to 120 GB	4 GB Expansion up to 120 GB	4 GB Expansion up to 120 GB	4 GB Expansion up to 120 GB
Power supply				
Voltage	24 V DC	24 V DC	24 V DC	24 V DC
Currant	max. 2.4 A	max. 2.4 A	max. 2.4 A	max. 2.6 A
Operating system	Windows XP embedded / Professional	Windows XP embedded / Professional	Windows XP embedded / Professional	Windows XP embedded / Professional

Technical Data				
Version	MT-406	MT-416	MT-436	MT-456
Ambient conditions				
Protection	Front IP66 Back IP65	Front IP66 Back IP65	Front IP66 Back IP65	Front IP66 Back IP65
Operating temperature range				
Cold start temperature	- 10 °C ... + 50 °C	- 10 °C ... + 50 °C	- 10 °C ... + 50 °C	- 10 °C ... + 50 °C
during operations	- 20 °C ... + 50 °C	- 20 °C ... + 50 °C	- 20 °C ... + 50 °C	- 20 °C ... + 50 °C
Operating with heater	- 30 °C ... + 50 °C	- 30 °C ... + 50 °C	- 30 °C ... + 50 °C	- 30 °C ... + 50 °C
Storage	- 20 °C ... + 60 °C	- 20 °C ... + 60 °C	- 20 °C ... + 60 °C	- 20 °C ... + 60 °C
Humidity	90 % at + 40 °C, non-condensing	90 % at + 40 °C, non-condensing	90 % at + 40 °C, non-condensing	90 % at + 40 °C, non-condensing
Vibration	3 Hz ... 22 Hz 1 mm Amplitude 22 Hz ... 500 Hz 1 g	3 Hz ... 22 Hz 1 mm Amplitude 22 Hz ... 500 Hz 1 g	3 Hz ... 22 Hz 1 mm Amplitude 22 Hz ... 500 Hz 1 g	3 Hz ... 22 Hz 1 mm Amplitude 22 Hz ... 500 Hz 1 g
Shock				
Operation	15 g / 11 ms	15 g / 11 ms	15 g / 11 ms	15 g / 11 ms
Transport	25 g / 6 ms	25 g / 6 ms	25 g / 6 ms	25 g / 6 ms
Dimensions [mm]				
Front (w x h)	400 mm x 270 mm	372 mm x 270 mm	440 mm x 340 mm	535 mm x 425 mm
Cut-out (w x h x d)	385.5 mm x 257.5 mm x 150 mm	359.5 mm x 257.5 mm x 150 mm	427.5 mm x 327.5 mm x 165 mm	522.5 mm x 412.5 mm x 165 mm



Accessories and Spare Parts			
Designation	Description	Ordering code	Weight kg
Stainless steel housing V2A	<ul style="list-style-type: none"> • Material V2A, SS306 • Dimensions (WxHxD): 570 mm x 570 mm x 320 mm • with cover cut-out 	HSG-x06-V2A	21,850
		HSG-x16-V2A	21,850
		HSG-x36-V2A	21,850
	<ul style="list-style-type: none"> • Material V2A, SS306 • Dimensions (WxHxD): 650 mm x 540 mm x 320 mm • with cover cut-out 	HSG-x56-V2A	23,650
Mounting options V2A (add. on price)	Wall mounting, 3 entries M20, moulded plastic	HSG-xx6-V2A-W	0,020
	300° rotating coupling on standpipe with length 1300 mm	HSG-xx6-V2A-STF	7,350
	300° rotating coupling on hanging elbow pipe with length 450 mm	HSG-xx6-V2A-EBT	1,000
	300° rotating coupling on wall mounted elbow pipe with length 450 mm	HSG-xx6-V2A-EBB	1,000
Housing options V2A (add. on price)	additional keyboard 30°	HSG-xx6-V2A-T	--
	additional Lexan glass for ambient temperatures down to - 40 °C (with heater)	HSG-xx6-V2A-ST	3,550
	additional sunroof	HSG-xx6-V2A-SR	1,000
	additional hand grips	HSG-xx6-V2A-HND	--
Stainless steel housing V4A	<ul style="list-style-type: none"> • Material V4A, SS316, sea water resistant • Dimensions (BxHxT) 570 mm x 450 mm x 320 mm • with cover cut-out 	HSG-x36-V4A	25,900
Mounting options V4A (add. on price)	Wall mounting, 3 entries M20, moulded plastic	HSG-xx6-V4A-W	0,040
	300° rotating coupling on standpipe with length 1300 mm	HSG-xx6-V4A-STF	--
Cover cut-out (add. on price)	cut-out top	HSG-xx6-CTT	--
	cut-out centered	HSG-xx6-CTC	--
Housing options (add. on price)	breather mounted in basic unit	HSG-xx6-B	0,030
	Heater 2 x 50 W with temperature controller and housing insulation for temperatures up to - 30 °C	HSG-xx6-H	6,500
	additional cable gland M16 black	HSG-xx6-CG16	--
	additional cable gland M16 blue	HSG-xx6-CG16b	--
	additional cable gland M20 black	HSG-xx6-CG20	--
	additional cable gland M25 black	HSG-xx6-CG25	--
	cut-out for VB-USB-Plug front	HSG-xx6-USB-Plug	--
	mounting VB-USB-Plug inside	HSG-xx6-USB-Plug-I	--
	cut-out for flange socket for scanner and scanner holder	HSG-xx6-BCR	--
Wiegand card reader	Wiegand Swipe Card Reader with WCR interface	WCR-HID-Swipe	1,000
Ex i Barcode Scanner	Handheld scanner with Ex i interface	BCSi-SK200-RSST	1,000
	Wireless scanner with Ex e interface (package including base station, recharger and belt clip)	BCSi-SK300-Pack	4,000
BCSi Wall holder	Wall holder incl. installation material	BCSi-SK200-Wandhalterung	1,000
Card reader, intrinsically safe, contactless	Ex i Mifare Card reader with RSi interface	PCRI-Mifare	1,000
Memory	USB-Stick, intrinsically safe, 4 GB	USBi-Drive-4GB	1,000
	USB-Stick, intrinsically safe, 4 GB, with Recovery and Backup Function	USBi-Drive-4GB-Recovery	1,000
	USB extension and bracket with USB connection for front IP 65 or installation in field housing	VB-USB-Plug	--



Accessories and Spare Parts			
Designation	Description	Ordering code	Weight kg
Ex i Keyboard	in QWERTZ, 105 keys, PS2 interface	KBDi-PS2-QZ	1,800
	in QWERTY, 105 keys, PS2 interface	KBDi-PS2-QY	1,800
	in AZERTY, 105 keys, PS2 interface	KBDi-PS2-AY	1,800
Ex i Keyboard with integrated Trackball	in QWERTZ, 107 keys, PS2 interface, trackball	KBDi-TB50-PS2-QZ	2,500
	in QWERTY, 107 keys, PS2 interface, trackball	KBDi-TB50-PS2-QY	2,500
	in AZERTY, 107 keys, PS2 interface, trackball	KBDi-TB50-PS2-AY	2,500
Ex i Keyboard with integrated Joystick	in QWERTZ, 107 keys, PS2 interface, joystick	KBDi-JS-PS2-QZ	2,500
	in QWERTY, 107 keys, PS2 interface, joystick	KBDi-JS-PS2-QY	2,500
	in AZERTY, 107 keys, PS2 interface, joystick	KBDi-JS-PS2-AY	2,500
Exi Trackball	Diameter 50 mm, PS2 interface	TBi50	0,600
Ex i Joystick	IP 65, PS2 interface	JSi	0,600
Field cable	Patch cable MTRJ => SC (SK-KJ1710 --> Exicom)	VB-SC-MTRJ	1,000
	Patch cable 3 m, 2 x RJ45 (SK-KJ1710 --> PC / Switch)	VB-SFTP-CAT5-Patch-3,0	1,000
	Patch cable 3m, Open => RJ45 (Eagle/Open HMI => Switch)	VB-TP-CAT5-Exe-RJ45-Patch	1,000
	Field cable optical fiber, diverse types	on request	
	Field cable copper, CAT5E, AWG22 price per meter	VB-TP-CAT5-AWG22	--
	RJ45 plug, metal, confectionable at field	VB-RJ45-PLUG-180	--
	Extension scanning interface to flange socket M12	VB-BC-3	1,000
Operating system	Multilingual Windows XP Embedded installation with:		
	Language Set 1 (Europe, America) English, German, French, Italian, Spanish, Portugese, Brazilian, Dutch, Danish, Swedish, Norwegian, Finnish, Greek, Hungary, Czech, Polish, Turkish, Russian	WINXPE-SET1	1,000
	Language Set 3 (Asia) English, German, Turkish, Hebrew, Arabic, Chinese, Japanese, Korean, Thai	WINXPE-SET3	1,000
	Windows XP professional (min. 8 GB CF-Card required):		
	Multilingual (like XP Embedded sets 1 + 3)	WINXPproMUL	1,000
	WINCC 2007 Flexible preinstalled with:		
	128 Powertags, Runtime-SW, Single License	WINCC-Flexible-2007-Runtime128	0,300
	512 Powertags, Runtime-SW, Single License	WINCC-Flexible-2007-Runtime512	0,030
	2048 Powertags, Runtime-SW, Single License	WINCC-Flexible-2007-Runtime-2K	0,030
	Application software preinstalled with functionality guarantee	on request	

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