

MFC 5150 SERIES HART COMMUNICATOR

NON-HAZARDOUS LOCATION
MFC 5150
MFC 5150X

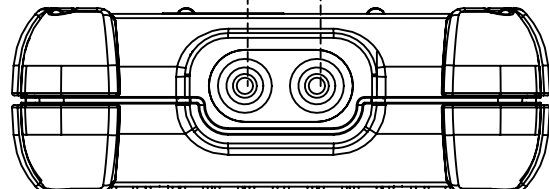
HAZARDOUS LOCATION

MFC 5150X
Class I, Div. 1 Groups A, B, C, D; T4
Class I, Zone 0, AEx ia IIC T4
Ex ia IIC T4, IECEx UL 13.0004
-10°C < Ta < +50°C
Intrinsically Safe Circuit Only
CE 0539 II 1 G
Ex ia IIC T4 Ga
DEMKO 13 ATEX 1115457

REVISIONS HISTORY				
REV.	ECO #	DESCRIPTION	DATE	BY
IR	EO - 7156	INITIAL RELEASE	3-15-13	JS
A	EO - 7184	ADD Um TO LABEL & POLARITY MARKS, See EO	5-14-13	JS

- Charger assembly may be used, (Meriam P/N Z9A879)
- AC/DC adapter may be used, (Meriam P/N Z9P822) Input 110-240 VAC / 50/60 Hz, 24 Watts, 1.6 Amps, 15 Volts
- Um (battery) = 5V, Um (USB) = 5V

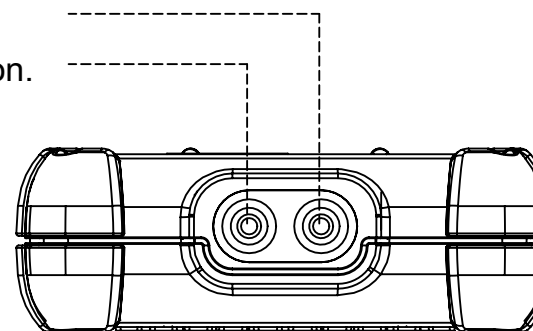
Hart Terminals:
30 VDC Max.
Hart Communication



Hart Terminals:

Connect to Certified Intrinsically Safe circuit only for Hart Communication.

Ui = 30V, Ii = 200mA,
Pi = 1.25W, Ci = 0,
Li = 0



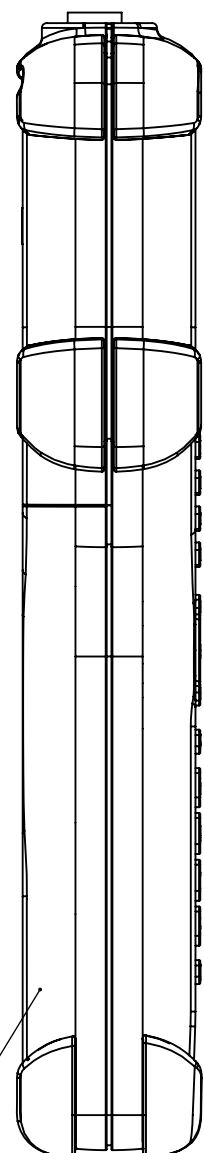
Note: Capacitance and Inductance of the field wiring from the intrinsically safe equipment to the associated apparatus shall be calculated and must be included in the system calculations as shown in Table 1. Cable capacitance, Ccable, plus intrinsically safe equipment capacitance, Ci, must be less than the marked capacitance, Ca (or Co), shown on any associated apparatus used. The same applies for inductance (Lcable, Li and La or Lo respectively). Where the cable capacitance and inductance per foot are not known, the following values shall be used. Ccable = 60pF/ft., Lcable = 0.2µH/ft.

I.S. Equipment	Associated Apparatus
V max (or Ui)	Voc or Vt (or Uo)
I max (or Ii)	Isc or It (or Io)
P max (or Pi)	Po
Ci + Ccable	Ca (or Co)
Li + Lcable	La (or Lo)

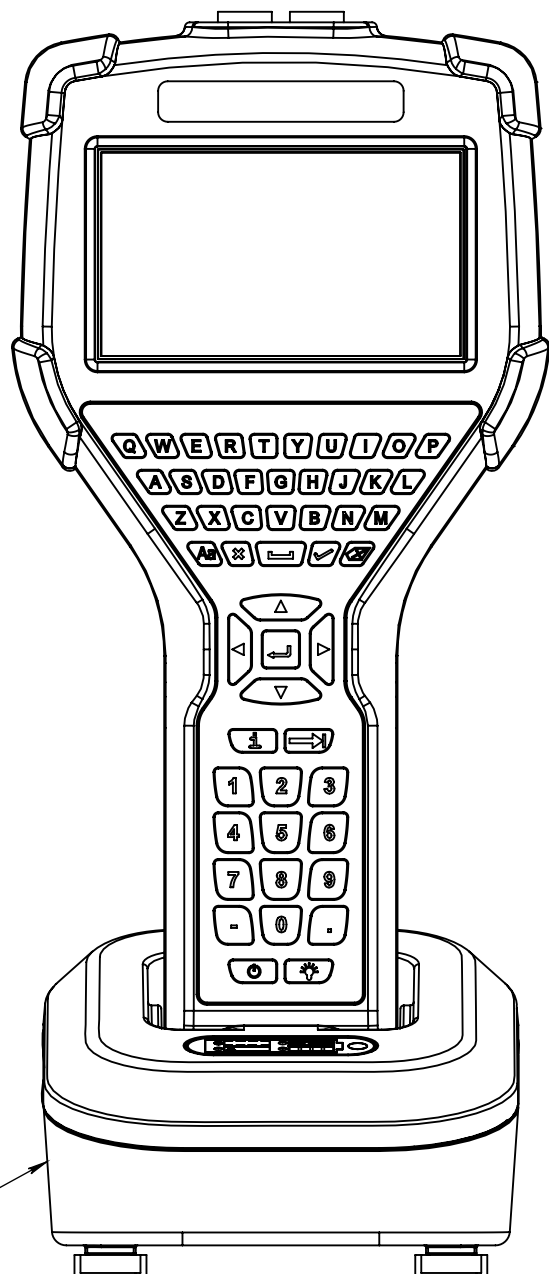
If Po of the associated apparatus is not known, it may be calculated using the formula $Po = (Voc * Isc) / 4 = (Uo * Io) / 4$

WARNINGS:

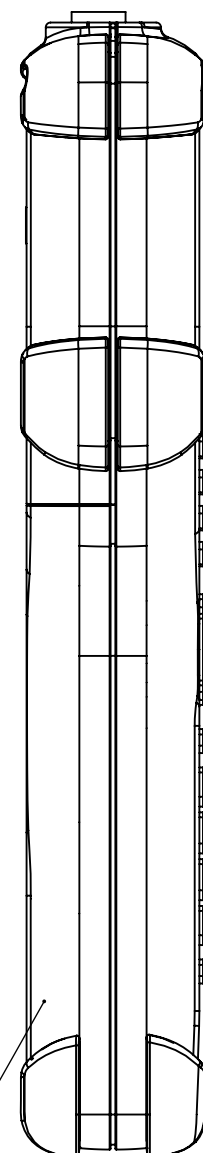
- SUBSTITUTING OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY!
- To prevent ignition of flammable or explosive atmospheres,
 - Disconnect power before servicing.
 - Do Not open or service unit in flammable or explosive atmosphere.
 - Do Not use any battery pack other than 5150 Series Pack Z9A820-x.
 - Do Not Charge in Hazardous Location.
- Associated apparatus output current must be limited by a resistor such that the output voltage-current plot is a straight line drawn between open-circuit voltage and short-circuit current.
- Selected associated apparatus must be third party listed as providing intrinsically safe circuits for the application, and have Voc or Vt not exceeding Vmax (or Uo not exceeding Ui), Isc or It not exceeding Imax (or Io not exceeding Ii), and the Po of the associated apparatus must be less than or equal to the Pmax or Pi of the intrinsically safe equipment, as shown in Table 1.
- Associated apparatus must not be used in combination unless permitted by the associated apparatus certification.



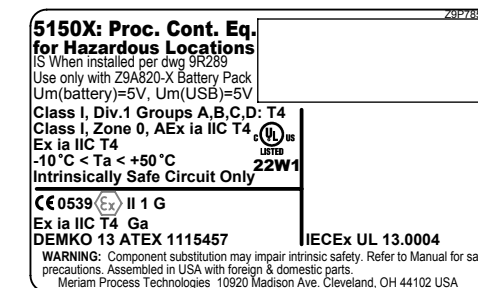
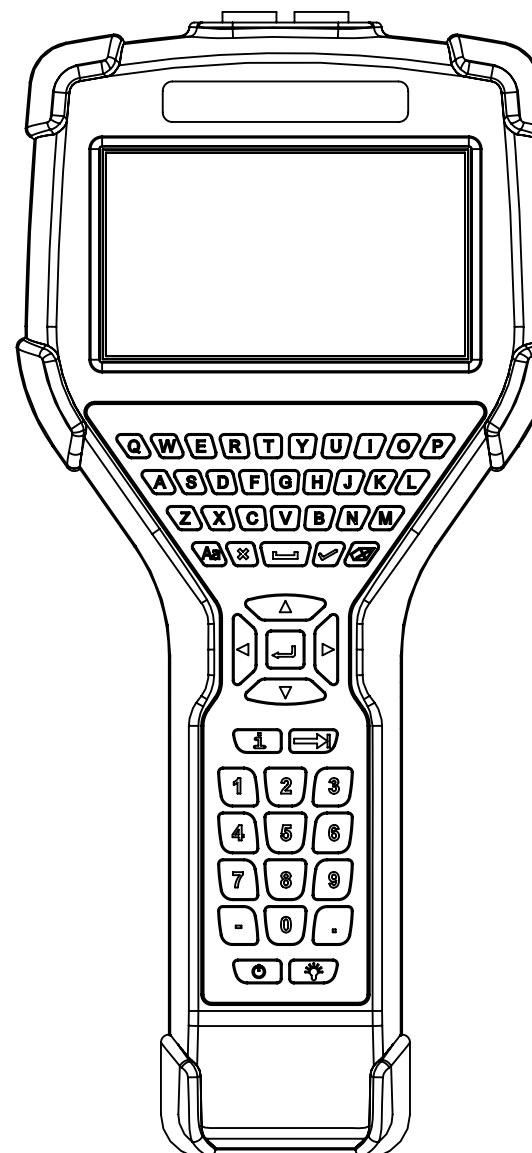
5150 Series Battery Pack



5150 Series Charger Asm



5150 Series Battery Pack



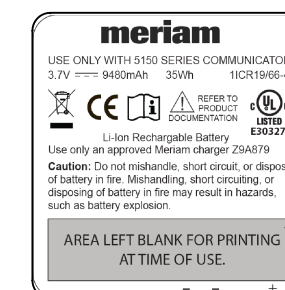
CERT LABEL

NOTE:
ALL EXPOSED METAL PARTS ARE CONSTRUCTED FROM 300 SERIES STAINLESS STEEL.
CASE FASTENERS MAY BE MADE FROM STEEL WITH ZINC PLATE.
NO LIGHT METALS ALLOWED.

5150 Series Battery Pack
WARNING: BATTERIES MUST BE CHARGED IN A NON-HAZARDOUS LOCATION ONLY. SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.

SMALL BATTERY LABEL

MERIAM BATTERY PACK NUMBER Z9A820-X WHERE X=1-9



LARGE BATTERY LABEL

MFC 5150 Series Intrinsic Safety Control Drawing

SCHEDULE DRAWING
NO REVISION TO DRAWING ON SAFETY AND / OR IS / ATEX ITEMS WITHOUT DEMKO APPROVAL

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF MERIAM PROCESS TECHNOLOGIES. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF MERIAM PROCESS TECHNOLOGIES IS PROHIBITED.

UNLESS OTHERWISE SPECIFIED: DIM. ARE IN INCH/(MM)		
1. DIMENSIONS AND TOLERANCING PER ASME Y14.5M-1994		
2. INCH STANDARD AND INCLUDE APPLIED FINISHES		
3. MULTIVIEW AND SECTIONAL VIEW DRAWINGS PER ASME Y14.3M-1994		
4. APPLICATION OF ENGINEERING DRAWINGS PER ASME Y14.24-1999		
5. REMOVE BURRS AND SHARP EDGES: MAX = .020(0.5)		
6. CHAMFER OR DEBURR HOLES: MAX = .010(0.25)		
7. MACHINED FILLET RADIUS: .020(0.5)		
8. MACHINED SURFACE FLAT WITHIN .001 IN/IN [0.25mm/mm]; OTHER SURFACE FLAT WITHIN .005 IN/IN [0.127 mm/mm]		
9. SURFACE FINISHES: 125 µIN OR [3.2 µm]		
10. CONCENTRICITY MACH. SURF. TIR WITHIN 1/2 SUM OF DIAM.TOLERANCE, .001 [0.025] MIN.		
11. TOLERANCES DECIMALS ARE:	INCH	mm
	.XX ± .030	.XX ± 0.8
	.XXX ± .010	.XXX ± 0.25
	.XXXX ± .005	.XXXX ± 0.13
	ANGULAR	≤ ± 0°30'
MATERIAL:	OPTIONAL:	
FINISH:	OPTIONAL:	

APPROVALS		
NAME	DATE	
DRAWN DAVID HALAN	1-16-13	
CHECKED JS / JD	1-17-13	
ENG APPR.		
MFG APPR.		

COMMENTS:
DOCUMENTED ON 3D CAD with SolidWorks.
Solids File: Final Assembly 6
Drawing File: 9R289-A
WHERE USED: MERIAM MANUAL

meriam
process technologies
a Scott Fetzer company

10920 MADISON AVENUE
CLEVELAND, OHIO 44102

TITLE:
MFC 5150 HART Communicator
Meriam Control Drawing

SIZE DWG. NO. REV
C 9R289 A

SCALE: 1:1 WEIGHT: SHEET 1 OF 1