

TU839

ABB Ability™ System 800xA® hardware selector



The TU839 MTU can have up to 8 I/O channels and two groups of connections for sensor power distribution. Each channel has two I/O connections. The process voltage can be connected to two individually isolated groups for sensor power distribution. Each group has a 200 mA fuse. The maximum rated voltage is 250 V and maximum rated current is 1 A per channel. It is recommended that the fuse rating be chosen to meet the applications needs.

The MTU distributes the ModuleBus to the I/O module and to the next MTU. It also generates the correct address to the I/O module by shifting the outgoing position signals to the next MTU.

The MTU can be mounted on a standard DIN rail. It has a mechanical latch that locks the MTU to the DIN rail.

Two mechanical keys are used to configure the MTU for different types of I/O modules. This is only a mechanical configuration and it does not affect the functionality of the MTU or the I/O module. Each key has six positions, which gives a total number of 36 different configurations.

Features and benefits

- 8 individually isolated I/O channels.
- Two individually isolated, fused groups for sensor power distribution.
- Connections to ModuleBus and I/O modules.
- Mechanical keying prevents insertion of the wrong I/O module.
- Latching device to DIN rail for grounding.
- DIN rail mounting.

General info	
Article number	3BSE046966R1
Type	Extended
Connection	Terminal block
Channels	8
Voltage	250 V
Mounting	Both directions
Mounting detail	55 °C (131 °F)
Use with I/O	DI820, DI821and DI825
Process connections	28 up to 8 I/O channels (2 terminals per channel) 2x6 Process Power terminals 0.2 A
Single/redundant I/O	Single

Detailed data	
Maximum current per I/O channel	1 A
Maximum current process connection	10 A
Acceptable wire sizes	Stranded: 24-14 AWG 0.2-2,5 mm ² (solid and stranded) Recommended torque 0.5 Nm.
Dielectric test voltage	2300 V a.c. channel to ground 1350 V a.c. channel to channel

Environment and certification	
CE mark	Yes
Electrical safety	EN 61010-1, UL 61010-1, EN 61010-2-201, UL 61010-2-201
Hazardous Location	-
Marine certification	-
Temperature, Operating	0 to +55 °C (+32 to +131 °F), approvals are issued for +5 to +55 °C
Temperature, Storage	-40 to +70 °C (-40 to +158 °F)
Pollution degree	Degree 2, IEC 60664-1
Corrosion protection	ISA-S71.04: G3
Relative humidity	5 to 95 %, non-condensing
Max ambient temperature	55 °C (131 °F)
Protection class	IP20 according to IEC 60529
Mechanical operating conditions	IEC/EN 61131-2
EMC	EN 61000-6-4, EN 61000-6-2
Overvoltage categories	IEC/EN 60664-1, EN 50178
Equipment class	Class I according to IEC 61140; (earth protected)
RoHS compliance	EN 50581:2012
WEEE compliance	DIRECTIVE/2012/19/EU

Dimensions	
Width	126 mm (5 in.) including connector, 120.5 mm (4.74 in.) edge to edge installed.
Depth	64 mm (2.52 in.) including terminals
Height	110 mm (4.3 in.)
Weight	0.28 kg (0.6 lbs)

solutions.abb/800xA
solutions.abb/controlsystems

800xA and Symphony Plus is a registered trademark of ABB. All rights to other trademarks reside with their respective owners.

We reserve the right to make technical changes to the products or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not assume any responsibility for any errors or incomplete information in this document.

We reserve all rights to this document and the items and images it contains. The reproduction, disclosure to third parties or the use of the content of this document – including parts thereof – are prohibited without ABB's prior written permission.

Copyright© 2025 ABB All rights reserved