ABB CI845 Manual

Brand	ABB
Product Series	ABB
Product Type	Ethernet FCI Module

Description

Select I/O is an Ethernet networked, single channel granular I/O system for the ABB Ability™ System 800xA automation platform. Select I/O helps decouple project tasks, minimizes the impact of late changes, and supports standardization of I/O cabinetry ensuring automation projects are delivered on time and under budget. A Signal Conditioning Module (SCM) performs the necessary signal conditioning and powering of the connected field device for one I/O channel.

The CI845 Ethernet Fieldbus Communication Interface Module (FCI) is responsible for communications of S800 I/O or Select I/O to the AC 800M controllers. For redundant configurations, two CI845s are required to be installed in the TU860 or TU865 Ethernet Field Communications Interface MTUs.

System 800xA offers flexible and modular I/O solutions through fieldbus technologies, wireless I/O and hardwired I/O systems like S800 and S900. The system is now enhanced with Select I/O that allows to condition each signal coming from the field individually. Select I/O is Ethernet connected and consists of single channel granular Signal Conditioning Modules (SCM).
Features and benefits
Can be used as single or redundant
Supports both Select I/O and S800 on Ethernet
Supports 12 single or 12 redundant S800 I/O modules
Supports up to 192 Select I/O channels
Possible to use with single or redundant 24V power supplies
Built-in power voting
Built-in supervision of power supply A and power supply B
Built-in cabinet temperature measurement
Built-in diagnostics
Soft marshalling
Optimized engineering
HART v7, HART pass-through
HART variables to the application (Select I/O)
Sequense of Events
Supports hot swap
Can be used in hazardous area
Mechanical locking slider which turns off power before removal
Mechanical keying
LED indicators
General info
Article number 3BSE075853R1
Communication protocol Ethernet
Type Ethernet FCI Module
Master or slave Slave
HART Yes
SOE Yes

Redundancy Yes
Hot swap Yes
High integrity N/A
Intrinsic safety N/A
Mechanics Select I/O
Detailed data
Isolation Galvanic isolation between power supply and I/O modules
Diagnostics Internal hardware supervision
Communication supervision
Internal power supervision
Supervision of incoming system power A and B
Cabinet temperature supervision
Power dissipation 5 W
Installation in Hazardous Area/Locations Yes/Yes
Input voltage range 19.2 ... 30 V
Environment and certification
Temperature, Operating -40 °C (-40 °F) to +70 °C (158 °F)
Temperature, Storage -40 °C (-40 °F) to +85 °C (185 °F)
Pollution degree Pollution Degree 2 acc. to IEC 60664-1
Relative humidity 5 to 95 %, non-condensation
Altitude -1000 to 5000 m (restrictions apply)
Mechanical operating conditions IEC 61131-2
EMC IEC/EN 61000-6-4, IEC/EN 61000-6-2
Overvoltage categories Category II acc. to IEC 60664-1
Protection class IP20 acc. to IEC 60529
CE-marking Yes
UKCA Yes
Electrical Safety IEC/EN 61010-1
UL 61010-1
CSA-C22.2 No. 61010-1-12
IEC/EN 61010-2-201
UL 61010-2-201
CSA C22.2 No. 61010-2-201
Marine certification DNV, ABS
Corrosive atmosphere G3
RoHS compliance EU RoHS, UAE RoHS, CN RoHS
WEEE compliance EU
Hazardous Area ATEX II 3G Ex nA IIC T4 Gc
II 3G Ex ec IIC T4 Gc
II 3G Ex ic nA IIC T4 Gc
II 3G Ex ic ec IIC T4 Gc
Hazardous Area IECEx Available on IPA:
II 3G Ex nA IIC T4 Gc
II 3G Ex ec IIC T4 Gc
II 3G Ex ic nA IIC T4 Gc
II 3G Ex ic ec IIC T4 Gc
Hazardous Location US/CAN cULus
CL I, ZN 2, AEx ec IIC T4 Gc, Ex ec IIC T4 Gc X
CL I, ZN 2, AEx nA IIC T4 Gc, Ex nA IIC T4 Gc X
CL I, DIV 2, Groups A-D T4
Hazardous Area CCC Ex ec IIC T4 Gc

Ex ec ic IIC T4 Gc
Dimensions
Width 30 mm
Depth 121.7 mm
Height 135 mm
Weight (including base) 225 g