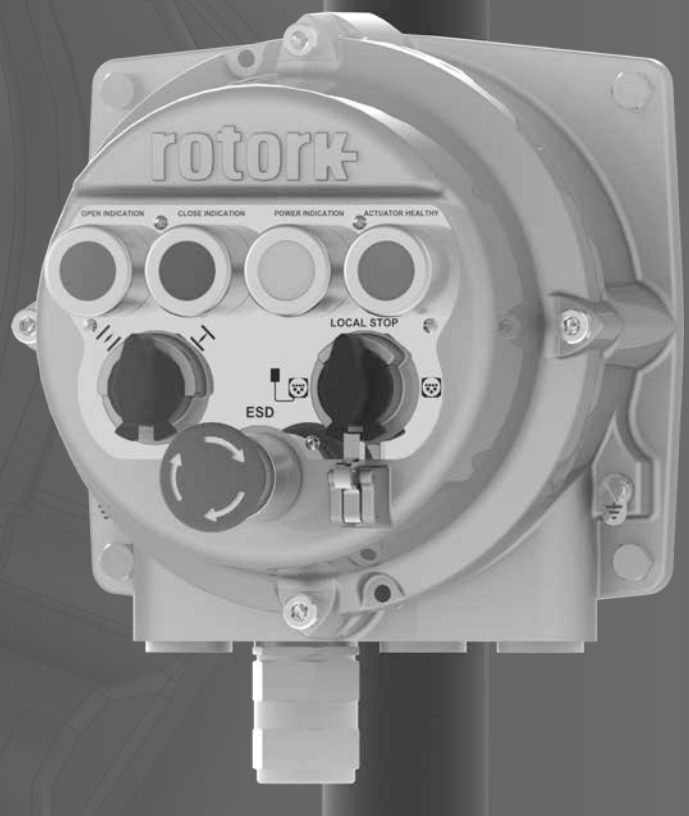


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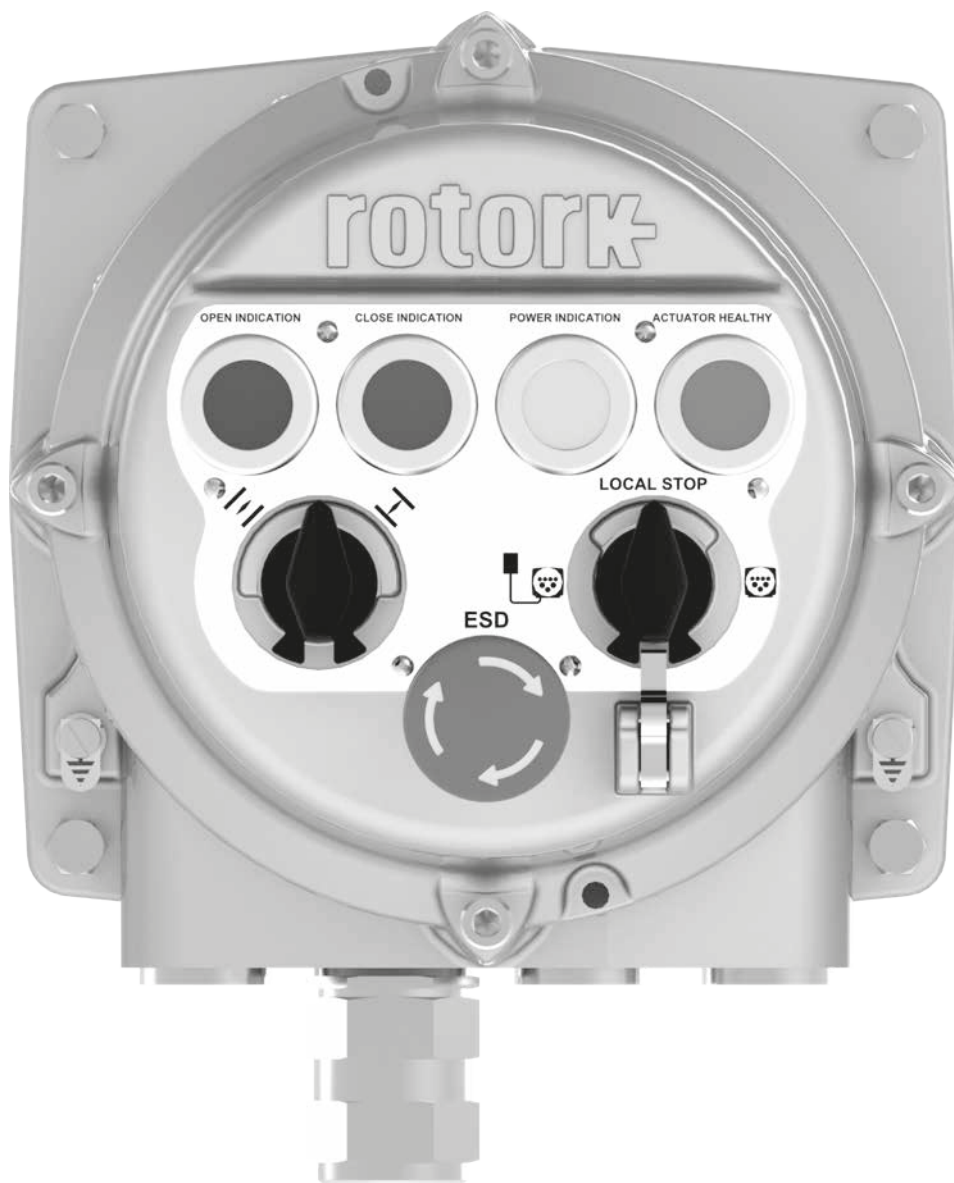
Local Hand Station

Installation and Maintenance Instructions



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1. Introduction

⚠ This manual contains important safety information. Please ensure it is thoroughly read and understood before installing, operating or maintaining the equipment.

This manual provides instruction on:

- Electrical (local and remote) operation
- Preparation and installation of the local hand station between the actuator and the control system (DCS)
- Subsequent commissioning and adjustment of the Basic Settings for correct valve operation
- Commissioning and adjustment of the Configuration Settings to suit site-specific control and indication requirements

2. Mounting

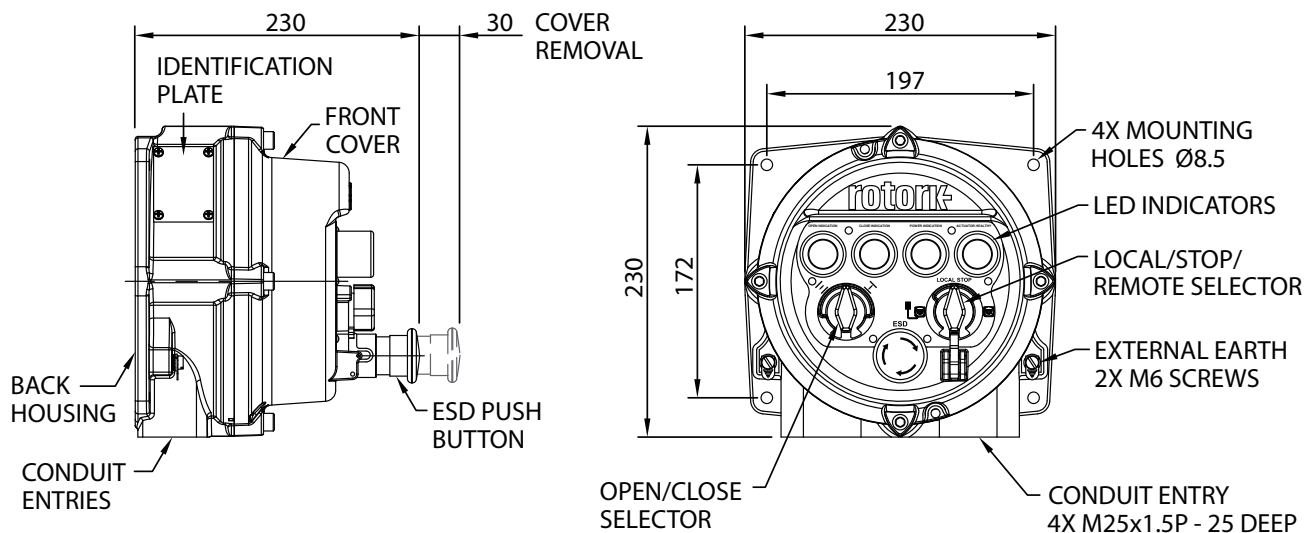
Local Hand Station Mounting

The Local Hand Station (LHS) can be mounted either directly onto a wall or onto a pole using suitable 'C' brackets. Space should be left around the housing to allow for the fitting of cable glands or conduit. Positioning of the LHS should be such that easy viewing and operation can be carried out at eye level. Removal of the FRONT cover is not necessary in order to mount the unit but the front cover needs to be removed when cabling to the actuator/DCS.

The back housing may be mounted in any position (90° increments) to accommodate different cable / conduit entry requirements. Rotate the front cover to maintain appropriate viewing orientation for the control selectors and LED indicators.

NOTE: Maximum Unit Weight = 5.7 kg

- Locate a suitable place (flat vertical wall or structure) to mount the LHS. The control selectors and LED indicators should be accessible for operation and visibility
- Mark up a template using the diagrams below. Use the template to mark the wall or structure
- Ensure any work permits are obtained before starting work. Prepare the mounting holes using suitable tools
- Fixings must be selected to fully support the weight of the LHS
- Install the LHS to the structure using safe working practices. Tighten all fixings to secure the LHS in place



Dimensions in millimetres (mm).

3. Settings

Using the Local Hand Station with the Connected Actuator

The LHS will only operate when the connected actuator is set to remote control mode.

Mode selection is determined by a combination of the actuator LOCAL/STOP/REMOTE selector and the Local Hand Station LOCAL/STOP/REMOTE selector.

Local Mode: The OPEN/CLOSE selector will operate the actuator. High priority remote control signals may operate the actuator depending on configuration.

Stop Mode: Actuator operation is inhibited. High priority remote control signals may operate the actuator depending on configuration.

Remote Mode: Remote Open and Close hardwired signals will operate the actuator. High priority remote control signals will override other hardwired signals. The OPEN/CLOSE selector will not affect operation.

Actuator Selectors	Local Hand Station Selectors	Actuator Control
Local	Local	Actuator*
Local	Stop	Actuator*
Local	Remote	Actuator*
Stop	Local	Stop*
Stop	Stop	Stop*
Stop	Remote	Stop*
Remote	Local	Local Hand Station
Remote	Stop	Stop*
Remote	Remote	DCS

* High priority remote control signals (ESD) may be configured to operate the actuator and override other control signals.

4. Electrical Connections

Power for the LHS can be sourced from the AC/DC output of the connected actuator or from the connected control system.

Interconnecting cable is not supplied. Below is a table of the minimum cable specification for remote mounting up to 20 m.

No.	Parameters	Specifications
1	Type of cable	Shielded multiconductor cable
2	No. of cores	10
3	Wire gauge	22 Awg
4	Conductor material	Copper
5	Core insulation material	PVC
6	Shield type	Foil
7	Outer sheath	PVC
8	Voltage rating	300 V
9	Current rating	≥1 A

Electrical Cable Specification for Actuator to LHS

No.	Parameters	Specifications
1	Type of Cable	Hook up
2	Wire Gauge	22 AWG
3	Conductor Material	Copper
4	Core Insulation Material	PVC
5	Voltage Rating	300 V
6	Current Rating	≥1 A

Electrical Cable Specification for Actuator internal wiring

Earth Ground Connection

A dedicated external earth point is provided for the attachment of a protective earth cable.

Refer to LHS wiring diagram for termination details.

Cable Entry

Four cable entries are available with the LHS to suit all necessary cable connections. Only appropriately-certified flameproof cable glands or conduit may be used in hazardous locations. The four cable entries are tapped M25 x 1.5p, however other sizes can be achieved through use of conduit thread adaptors. In hazardous locations, only certified flameproof thread adaptors can be used. Unused cable entries must be blanked using Ex d IIC certified blanking elements. Ex blanking elements and threaded adaptors must not invalidate the degree of ingress protection IP68 (1.2 metres for 48 hours).

Please follow the instructions in LHS mounting before attempting to cable up the unit.

- Cut an appropriate length of the specified cable to suit the installation (add approximately 20 mm at each end for final termination)
- Route the cable from the actuator terminal compartment to the LHS terminal compartment and secure the glands to ensure ingress protection of both devices is maintained
- Strip back the insulation and braiding so that the inner twisted pair cores are exposed. Fit AMP type ring terminal crimps to each wire and shield braid. Insulate the braid to prevent short circuits
- Connect the cable cores in each compartment to the correct terminal, following the wiring diagram supplied

5. Approvals

Refer to LHS nameplate for unit specific approval details.

European – Hazardous Area

ATEX (2014/34/EU) II 2 G
Ex db IIC T6 Gb, IP68
Temperature -20 °C to +70 °C (-4 °F to +158 °F)

International – Hazardous Area

IEC. IEC60079-0 & IEC60079-1
Ex db IIC T6 Gb, IP68
Temperature -20 °C to +70 °C (-4 °F to +158 °F)

Indian – Hazardous Area

IS/IEC 60079-0 & IS/IEC 60079-1
Ex d IIC T6 Gb, IP68
Temperature -20 °C to +70 °C (-4 °F to +158 °F)

Maximum Constructional Flamepath Gaps - ATEX / IECEx / Indian Certification

Flamepath	Max. Gap (mm)	Min. Length (mm)	Equipment Type
Front Cover / Back Housing	0.15	27.00	LHS
Front Cover / Control Selector	0.11	25.00	LHS

ATEX / IEC / Indian Certified LHS

⚠ SPECIAL CONDITIONS

The Local Hand Station is protected with a non-metallic coating. Clean with a damp cloth to avoid build up of static charge.

Only Rotork recommended grease to be applied on flamepath joint.

When the cable temperature is higher than 70 °C at entry point or 80 °C at branching point, use suitable cable and cable glands.

⚠ THREAD DETAILS FOR ATEX AND IECEx APPROVAL

Threaded Flamepath	Thread Size	Thread Length	Equipment Type
Cable Entries	M25x1.5	25.00	LHS
ESD	M20x1.5	15.00	LHS
LED	M20x1.5	15.00	LHS

⚠ EXTERNAL ENCLOSURE FASTENERS

The cover fastening screws are stainless steel socket head cap screws of property class A4-70 M8 and yield stress 450 Mpa.

Rotork has maintained more stringent gaps than those required by the standard. The user must refer to Rotork before carrying out any repairs or refurbishment to the equipment.

Separately certified entry devices conforming to standards IEC 60079-0 Ed 7.0 and IEC 60079-1 Ed 7.0 for level of protection 'db' must be fitted. Entry devices must be utilised within their respective Specific Conditions of Use and be utilised within their respective service temperature and IP ratings.

6. Environmental

End user advice on disposal at end of life of the product.

Subject	Definition	Remarks / examples	Hazardous	Recyclable	EU Waste Code	Disposal
Electrical & Electronic Equipment	Printed circuit boards Wire	All Products	Yes	Yes	20 01 35	Use specialist recyclers
	LED Indicator	All Products	Yes	Yes	17 04 10	
Glass	Soda Lime	LED Indicator Lamps	No	Yes	16 01 20	Use licensed recyclers
Plastics	Delrin	LED Indicator Diffuser	No	Yes	17 02 04	Dispose as general commercial waste, use specialist recyclers
Grease	MULTIS MS2 / LITHIUM GREASE	Flamepath Joint	Yes	No	13 02 08	Will require special treatment before disposal, use specialist recyclers or waste disposal companies
Metals	Aluminium	Back Housings and Covers, LED Housing	No	Yes	17 04 02	Use licensed recyclers
	Copper/Brass	Wire	No	Yes	17 04 01	
	Iron/Steel	Indicator label, Latch	No	Yes	17 04 05	
Rubber	Seals & O-rings	Cover	Yes	No	16 01 99	May require special treatment before disposal, use specialist waste disposal companies

In all cases check local authority regulation before disposal.

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A full listing of our worldwide sales and service network is available on our website.

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