



TRAFFICLITE EXPANSION MODULE

Model TFL200, Version 2



Installation and User Manual

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1 OVERVIEW

TrafficLite is an add-on module for Liftlog and MaxOut and provides 3 additional output relays. It can be used for controlling traffic lights, limiting high speed motion at high loads, and slack rope detection. Nb, TrafficLite REQUIRES a MaxOutDX, or LiftlogDX to work, it has no load sensing functions.

2 SPECIFICATIONS

2.1 Physical Specifications

Overall length (mm):	115
Overall width (mm):	100
Overall height (mm):	23
Weight (kg):	0.12
Mounting:	30mm DIN Rail

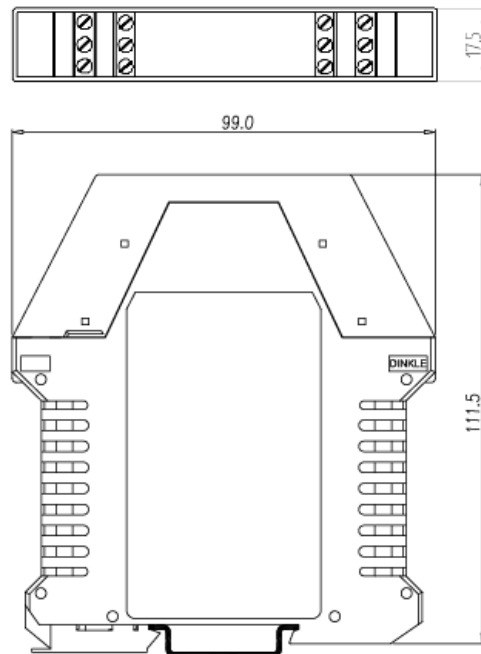


Figure 1: Case Dimensions



2.2 Electrical Specifications

Parameter	Description	Min	Typ	Max	Units
V_{in}	Supply voltage	24		250	V AC
I_{in}	Supply current	7	8	12	mA
V_{fault}	Max voltage for switch output			250	V AC
I_{fault}	Max current sink by switch output			4	A
P_{fault}	Max contactor inrush rating at 48V			200	W
	Allowable operating temperature	-40		85 ^{Note1}	°C

Note1: Extended operation at maximum temperature will reduce the life the device.

3 INSTALLATION DETAILS

3.1 Prior to Installation

Before installing your TrafficLite device visually inspect the device and check that:

- (a) the case is not damaged and fits together securely;
- (b) terminals are secure;
- (c) terminal numbering is as per the following diagram.



Figure 2: Terminal Positions



3.2 Wiring Diagrams

TrafficLite should be installed next to the MaxOut or Liftlog that will be controlling it. The maximum length of cable between the units should not exceed 200mm

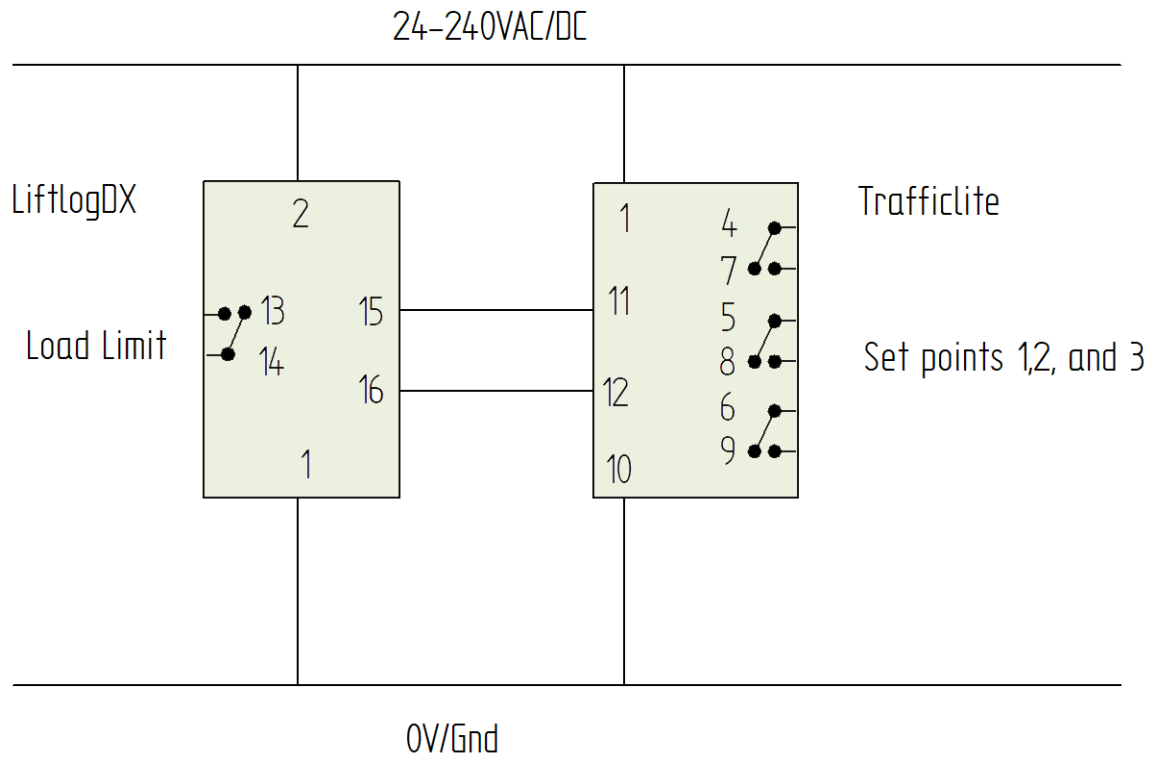


Figure 3: Connecting to Liftlog or MaxOut

4 COMMISSIONING DETAILS

TrafficLite is set up when you configure the Liftlog or MaxOut that it is connected to. See the LiftlogDX and MaxOutDX manuals for details on installing the software to do this.



4.1 Setting set points

On the configuration screen there are three configurable set points.

Traffic Lite			
SetPoint	Load (kg)	N/C	N/O
1	<input type="text" value="5000"/>	<input type="radio"/>	<input checked="" type="radio"/>
2	<input type="text" value="8000"/>	<input type="radio"/>	<input checked="" type="radio"/>
3	<input type="text" value="9000"/>	<input type="radio"/>	<input checked="" type="radio"/>

Figure 4: Set points

Enter the load for each set point in Kg or Lb and set the switch to be normally open or closed.

4.1.1 Setting up for traffic light display

For switching indicator lights (or sirens) the switches should be configured normally open. The contacts of the units are voltage free (floating) and can switch the high or low side of the circuit.

Traffic Lite			
SetPoint	Load (kg)	N/C	N/O
1	<input type="text" value="5000"/>	<input type="radio"/>	<input checked="" type="radio"/>
2	<input type="text" value="8000"/>	<input type="radio"/>	<input checked="" type="radio"/>
3	<input type="text" value="9000"/>	<input type="radio"/>	<input checked="" type="radio"/>

Figure 5: Settings for indicator lights

4.1.2 Setting up for high speed limiting

Typically one of the relays will be wired in series with the fast contactor for the up motion of the crane and set to normally closed.



Traffic Lite

SetPoint	Load (kg)	N/C	N/O
1	9000	<input checked="" type="radio"/>	<input type="radio"/>
2	10000	<input type="radio"/>	<input checked="" type="radio"/>
3	10000	<input type="radio"/>	<input checked="" type="radio"/>

Figure 6: Settings for speed limiting

In this example the high speed function would drop out at 9000Kg

4.1.3 Setting up for slack rope detection

Connect one of the relays in series with the control signal to the down contactor and set the set point to 0Kg

Traffic Lite

SetPoint	Load (kg)	N/C	N/O
1	0	<input checked="" type="radio"/>	<input type="radio"/>
2	10000	<input type="radio"/>	<input checked="" type="radio"/>
3	10000	<input type="radio"/>	<input checked="" type="radio"/>

Figure 7: Settings for slack rope detection

Nb for slack rope detection to work reliably the unit must see at least a 5% change in load when the rope goes slack. For a 10t crane this means the hook block, hook and any lifting fixture must weigh a MINIMUM of 500Kg. If you try to implement slack rope detection with a normal light duty hook block then you can be 100% sure that you will end up with an angry customer who can't lower the hook. In practice, slack rope detection requires additional load in the form of a lifting jig, or dead weight added to the crane.

When implementing slack rope detection the zero load for the MaxOut or Liftlog should always be taken with the hook at the top limit. If you don't do this then the Liflog or MaxOut will see the load decrease as the hook is raised because the rope is being wound onto the drum. If this causes the load to drop below the set point then the operator will be unable to lower the hook.



4.2 The Status LEDs

Your TrafficLite has three indicators on the front panel. Each indicates the status of each output.

Colour	Status
RED	Communications error
GREEN	CLOSED
BLUE	OPEN